

Mar 15 '22

THE GRAIN GROWERS' GUIDE

Organization · Education · Co-operation

Winnipeg, Man.

March 15, 1922

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A MANITOBA SCENE

SILO NUMBER

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The Canadian-Australian Line, operating in connection with the Canadian Pacific, has a service from Canada to Honolulu, Fiji, New Zealand and Australia.

Hotel Service

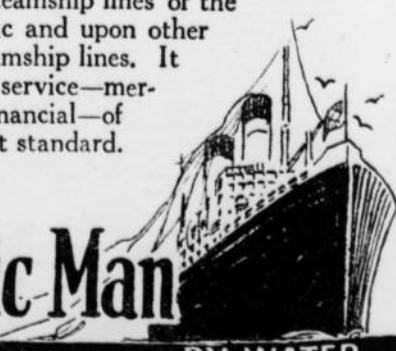
The Canadian Pacific has fourteen magnificent hotels from the Atlantic Ocean to the Pacific—eight, in leading cities or at important railway junctions, open the year round; six, at beautiful holiday resorts (including four in the Canadian Rockies) open in summer only. Canadian Pacific hotel service is the standard of excellence.

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THE GRAIN GROWERS' GUIDE

"Equal Rights to All and Special Privileges to None"

A Weekly Journal for Progressive Farmers

The Guide is absolutely owned and controlled by the organized farmers—entirely independent, and not one dollar of political, capitalistic, or special interest money is invested in it.

GEORGE F. CHIPMAN
Editor and Manager.

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March 15, 1922

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Classified (See Classified Page for details)

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Our Ottawa Letter

Progressives decide to allow Conservatives assume role of Official Opposition—
House opens with customary Pomp and Splendor
(By The Guide Special Correspondent)

THE first session of the 14th parliament of Canada is now underway, but so far only the preliminary frills and ceremonies have been attended to, and the commencement of serious business has been deferred to next week.

On Monday and Tuesday, supporters of the late government, M.P.'s, senators and defeated candidates gathered to hold a post mortem over the recent campaign, and whistle up some courage for the future. There was a certain amount of mutual reprimand, but Mr. Meighen was unanimously confirmed in his leadership and a committee was appointed to make arrangements for a national party convention at some time and place not yet fixed. It was also decided to discard the hybrid title which Sir R. Borden and Mr. Calder had foisted upon the party in 1920, and revert to the traditional name of Liberal-Conservative. So the old Tory party of Canada is once more back at its old moorings, but with its fortunes at their lowest ebb since Confederation.

Meighen Leads Opposition

On Wednesday morning the Progressive party held a caucus, and the question as to whether it should assume the role of official opposition was threshed out. There was a minority who felt the party should go into active opposition, but the great majority supported the view that better results could be obtained by acting as an independent and detached group. Other questions of policy and sessional strategy were discussed, and the following whips were appointed: Chief whip, J. F. Johnston; Ontario, R. H. Halbert; Manitoba, Robert Forke; Saskatchewan, Andrew Knox; Alberta and B.C., Alfred Speaker. The party was practically at full

strength and one and all were in good spirits and eager for a busy and fruitful session.

On Wednesday afternoon when the House met it was found that Mr. Meighen occupied the seat of the leader of the opposition, and his followers were packed close up to the speaker's chair on its left side. Lower down, without any intervening gap, came Mr. Crerar and the Progressives. Mr. Crerar has selected Mr. Hoey, of Springfield, as his desk companion, and has paid Miss Agnes MacPhail the compliment of giving her a front-bench seat. Just beyond her sit the two Laborites, Messrs. Woodsworth and Irvine, the latter of whom will attend the Progressive caucus. The numbers on the two sides of the House are practically equal, and such a balance is very satisfactory.

The New Speaker

After the Commons had met, they went in a body to the Senate chamber where Sir Louis Davies, acting as deputy for Lord Byng, bade them go apart and equip themselves properly for the opening ceremony by electing a speaker. When they had returned to their own abode the premier, seconded by Mr. Fielding, nominated Rodolphe Lemieux in a brief and felicitous speech, in which he recounted Mr. Lemieux's long record of public service and his many qualifications for the post. Mr. Meighen followed and endorsed the nomination, but he was in one of his captious moods and introduced a controversial note among his compliments. The Commons have always jealously guarded the right of choosing their own speaker, and Mr. Meighen quite properly complained that Mr. King had no right to intimate beforehand, as he did in a statement issued on December 29, that Mr. Lemieux would be elected speaker. This criticism was quite justified, but he showed bad taste in rebuking Mr. Lemieux for the tone of some of his campaign speeches and asking for an explanation why Mr. Boivin, the

Liberal M.P. who served so efficiently as deputy-speaker last session, had not been promoted. The premier flushed under the criticisms but essayed no reply.

Mr. Crerar was in a happier mood, and his commendation of the choice of Mr. Lemieux was not marred by any criticisms. He got in a good hit at Mr. Meighen when he promised Mr. Lemieux the co-operation of the party, scornfully designated last session "the dilapidated annex" by the ex-premier and now easily exceeding his own band in numbers. The House relished the thrust exceedingly. No other name being submitted, Mr. Lemieux was declared elected and escorted by Mr. King and Mr. Fielding to the chair, from which he made a short and happy speech, vowing to lay aside all party spirit and become the faithful servant of the House and the people of Canada. By culture, temperament and parliamentary experience he is well fitted for the position and will maintain its best traditions. After some requests for documents by Mr. Meighen the House adjourned.

Pomp and Ceremony

On Thursday there took place the formal opening of parliament by the governor-general. All the elaborate ceremonial which has been handed down from ancient feudalistic days was in full blast, and more than one honest democrat from the West gazed in mingled awe and indignation at the blaze or color and rich apparel, which proved that in certain circles at least both poverty and economy were unknown words. Some of them could not help contrasting the real hardships which they knew thousands of homesteaders were facing at the same minute with the care-free extravagance so abundantly visible.

The Speech from the Throne is a longer document than usual and promises treatment of most of our pressing problems, the railways, the tariff, marketing, immigration and external affairs among others. A tardy recognition that agriculture is the basic industry of the country marks the silent influence of the Progressive party, but the omission of any mention of redistribution was noticeable.

Continued on Page 47

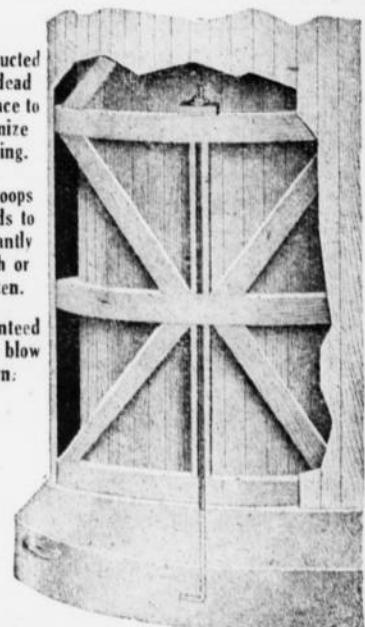
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SILO

Made of Wood

Constructed
with dead
air space to
minimize
freezing.

No hoops
or rods to
constantly
watch or
tighten.

Guaranteed
not to blow
down.

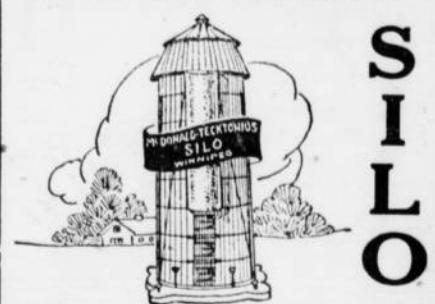


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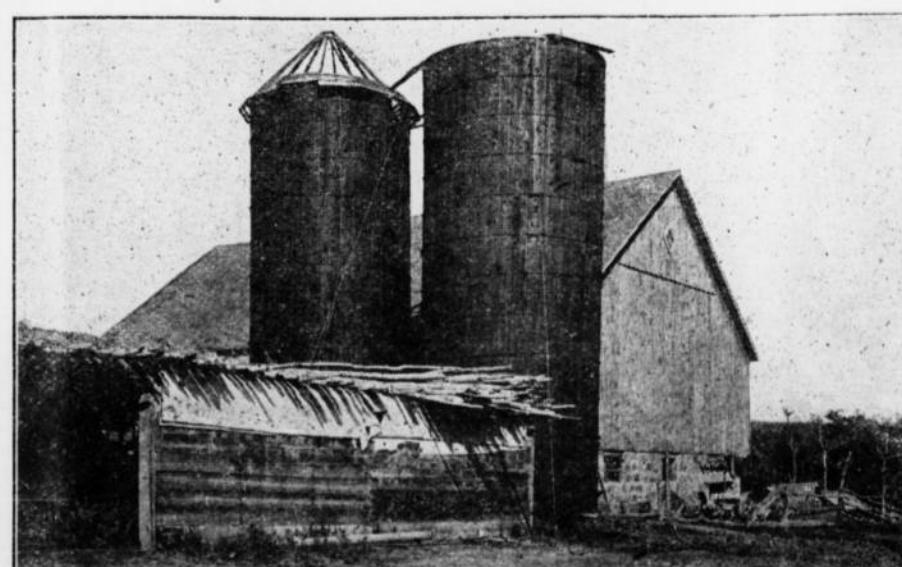
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LUMBER DEALERS
Portage La Prairie, Man.

Our Cover

The photograph used for the cover of this issue of The Guide was kindly loaned by the Field Husbandry Department of the Manitoba Agricultural College. The illustrations on pages 7 and 14 also came from this institution and show how completely silage crops have won the right to a place in the regular system of herd maintenance at St. Vital. As a measure of the progress which is being made with silage projects in Western Canada, it is worth noting that all the illustrations used in this issue, with material relating thereto, with one or two unimportant exceptions, came from prairie farms.



A promising pair of twins on a western farm.
Silo building, as well as silo filling, is a many-handed job.

L. C. McLain
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X TRY X
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MONARCH
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Picked Up Here and There

Some Questions and Answers on Various Phases of Silo Operation

Process of Ensilage Fermentation

Q.—Why does ensilage preserve fodder?

A.—As soon as green fodder is put in the silo fermentation commences. Bacteria and yeasts bring about a change in which a portion of the sugars contained in the plants are converted into mild acids, the same as are found in sour milk and in vinegar. If the exclusion of air has been ensured by air-tight walls and thorough tramping these mild acids prevent the development of any decay-producing bacteria, such as rot manure. The necessary fermentation raises the temperature, but this seldom exceeds 100 degrees.

Legume Silage

Q.—Why do legumes, such as alfalfa and sweet clover, make a poor quality of silage?

A.—Because the sugar content is so low that preservative acids are not produced by early fermentation in sufficient quantity to check decay.

Dairyman's Interest in Silage

Q.—What is the best evidence to show that silage induces heavy milk production?

A.—In a census taken by Hoard's Dairyman in Wisconsin covering over 28,000 cows, it was found that the silage-fed cows produced an average of 181 pounds butter-fat yearly, while the cows receiving no silage produced 151 pounds butter-fat. The net profit from the silage-fed cows was \$13.50 each. The net profit from the others was \$6.46. These figures are on the low valuations of 1908.

Breeding Powers

Q.—Will cows that are fed silage fail to breed regularly?

A.—No.

Flavor of Milk

Q.—Does silage affect the flavor of milk?

A.—In a community where few silos are in use you often hear rumors of bad effects from feeding silage. There is no more danger from feeding good silage than from any other form of feeds. Poor silage (moldy, rotted, silage), will, of course, produce bad effects just as will poor grain, hay or other feeds. Every farmer knows that spoiled or damaged feed fed to milking cows is very liable to cause tainted milk. Good silage, properly used, will in most cases help rather than harm milk. Some time ago, to determine whether the public generally objects to milk made by cows fed silage, 12 half-pint bottles of such milk were delivered at the best hotel in the Twin Cities (Minneapolis and St. Paul), every day for a month, making 360 samples in all. These were served to guests who ordered milk, and no complaints or criticism of any kind were made.

Calf Rations

Q.—Do calves which have been weaned need any feed other than silage?

A.—Yes, in addition to silage they should be supplied with either alfalfa or clover hay, and they should also be given a small amount of grain.

Supplementary Feeding

Q.—Will mature cattle thrive on silage alone?

A.—It is better to give mature cattle some supplementary feed, as silage contains a very high percentage of water. Cattle which are being maintained without any effort to produce gains in weight will come through all right on silage and straw. When gains are required there should be either alfalfa hay or its equivalent, sweet clover, or some grain added to the ration. Milk cows most certainly require a supplementary feed. (See page 9.)

Gas in Silo

Q.—Is the pit silo dangerous on account of gases?

A.—For the first few days after filling gas accumulates in pit silos, which makes it necessary to be cautious. This gas, carbon dioxide, is colorless, odorless, tasteless, and remains in the silo because it is heavier than air. It is not poisonous, but it is dangerous because it will not support life. If a bucket is lowered and raised rapidly

several times, a current of air is set up which removes the dangerous gas. The test of safety, if it seems necessary, is to lower a lighted lantern; if it goes out there is still gas in the silo. After fermentation has gone on for some time the danger of gas becomes very much lessened. In above-ground silos the gas escapes as it is formed.

Prime Consideration in Purchasing

Q.—What are the essentials to consider in buying a ready-made, knocked-down silo?

A.—Although the silo manufacturers always make strong talking points of their particular doors and door frames, roofs, anchoring devices, foundation fastenings, and methods of splicing staves in two-piece silos, the essentials to consider are the quality and kind of wood used in the silo and the reliability of the company manufacturing it.

Is Frost-Proof Silo Possible

Q.—Should I try to build a frost-proof silo?

A.—In this climate it is difficult and expensive to construct a silo absolutely frost-proof. Yet much freezing will be prevented by locating the silo on the protected side of the barn. During extreme cold weather all doors and windows should be closed and the silage kept covered.

Guarding Against Frost

Q.—What is the warmest silo?

A.—The double-wall silo, which has little or no material connecting the outside and the inside wall, will be warmest. There is very little difference in temperature between a so-called hollow-block wall, as they are generally made, and a solid wall of the same material.

The Silo Roof

Q.—Why is a good roof a necessity?

A.—Most of the freezing in a silo comes from the top. If the doors are kept closed, and the silage is covered during the coldest weather, freezing will not be serious.

Enclosed Silos

Q.—Is it wise to build a silo in the barn?

A.—The supreme advantage of having a silo in the barn is the protection afforded from frost, and this is a weighty consideration in Western Canada. The disadvantages are that it takes a lot of valuable space and is unhandy to fill. Round barns lend themselves to enclosed silos particularly well.

Hoops

Q.—How do good hoops protect the silo?

A.—When a wood silo is empty it has a tendency to shrink enough so that if the silo is not securely hooped and anchored the structure will fall in during the first wind storm. These hoops should be adjustable, for when the silo is empty they must be tightened, and when full, loosened. Usually more adjusting and care is necessary the first year than afterwards. The hoops are usually made of 1-inch mild steel rods. One hoop is placed always at the bottom and top. Between the top and bottom they are placed every two feet.

If round rods are used for hoops they should be rolled to fit the curve of the silo. Flat hoops two inches wide, made of No. 12 band iron, which is about 1/2-inch thick, are satisfactory for reinforcing a home-made stave silo. They are held together by tank lugs, which can be purchased at almost any hardware store. Flat hoops will not slip down if there is any shrinkage of the staves. There is more exposed surface for rusting in the flat hoop than for the same weight of round rod. Some means should be provided so that the hoops can be tightened and loosened.

Concrete Silos

Q.—Why should I build a concrete silo?

A.—It will be permanent, because of its strength to resist the pressure of the silage, and its action on the concrete, as well as any action of the weather, such as wetting, drying, freezing and thawing. It will be fireproof. It needs no attention on account of swelling and shrinking. If there is good sand and gravel on your place or within a team's hauling distance, it will be the cheapest form of silo.

Action on Concrete

Q.—Does silage spoil concrete?

A.—No.

Quality from Concrete Silo

Q.—Does concrete spoil silage?

A.—Silage may spoil sometimes in concrete silos, because the wall is porous, and therefore neither airtight nor waterproof. The best way to render it non-porous is to puddle the concrete during construction next to the inside wall with a flat spade, and then after taking down the forms to soak the wall, and paint it with cream cement from the top down, using a stiff whitewash brush. The spoiled silage at the juncture of the stave silo with its concrete foundation is due neither to the concrete nor to the wood, but either to a poor ledge or the fact that the joint is not air-tight.

Methods of Creosoting

Q.—What are the methods of creosoting the staves and which is most effective?

A.—The pressure treatment is the most satisfactory and is preferable to all other methods of treating wood stave silos, as the oil can be forced farther into the wood and distributed more evenly, making a much more thorough job than is possible by other methods. The timber used in silos is quite long, and, therefore, the pressure treatment is usually limited to a manufactured product. Since decay is fastest at the bottom ends, a combination of the brush and open tank methods of treatment is quite effective in preventing decay, and can be used by anyone considering the construction of a wood silo. The treatment consists of placing the staves on end in an iron tank and heating the creosote to between 200 and 220 degrees F. for from two to three hours. Both ends of the staves can be treated in this manner, and then the part in between can be creosoted by painting with two coats of hot creosote. There are companies manufacturing and selling silos thoroughly creosoted by the pressure method. Also there are others whose product is merely sprayed with creosote, or dipped in it. There has been advertised quite widely a creosote wood stave silo which has been treated under "atmospheric pressure." Whether this means that the wood has been given an open tank treatment or has been piled out in the open and a spray of creosote scattered in a "hit or miss" fashion over the wood, it is impossible to say. From the advertisements this would be all that is necessary to fulfill the claims made. From reports made by farmers purchasing such silos, it is quite evident that nothing more than the equivalent of a brush treatment has been used. Such statements as treated under "atmospheric pressure" mean absolutely nothing. The purchaser should learn beforehand the method of treatment he is paying for, and should keep in mind that the method of treatment is of greater importance than the quality of the creosote.

Do Cattle Object?

Q.—Does creosote contaminate silage?

A.—The odor is not serious after the first year if the wood is thoroughly seasoned before the silo is filled. The slight contamination of the silage does not seem to affect the health of the cattle.

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The Grain Growers' Guide

Winnipeg, Wednesday, March 15, 1922

Government Must Act Promptly

On another page in this issue of The Guide will be found the memorandum prepared by the delegation waiting upon the government to present the demands of the farmers' organizations in the three prairie provinces for the re-establishment of the Canada Wheat Board.

The memorandum states clearly and succinctly why the farmers are asking for the Wheat Board and why their request should be granted. It is not a demand for fixing the price of wheat. The market will still fix the price, and the farmers are asking for no more than the market price. What is wanted is an agency that will stabilize prices by spreading the supply over a longer period than is possible under the ordinary competitive system. This agency, desirable enough in ordinary times because of the particular economic conditions affecting the marketing of the western grain crop, is especially desirable at this time, when the situation in Europe is such that heavy purchasing in advance of demand is impossible, leading to a forcing of supplies upon the market with disastrous results to prices.

The condition in Europe makes it as imperative not only in the interest of western agriculture, but in the economic interest of the nation, as it was in 1919, that the Wheat Board should be established, for these conditions in the European market have precisely the same effect upon the primary industry in this country as the conditions in 1919. This fact the memorandum places beyond dispute, and it further demonstrates the far-reaching effects upon the entire business of the country of the serious depression in agriculture. That steps must be taken to give encouragement and relief to agriculture has been recognized by the United States Congress, which has voted large sums for the purpose. The farmers of Western Canada are not asking for something that would add to the burden of the taxpayers; they are asking for something that would not cost the government a cent and which would tend to promote better business conditions throughout the whole country, and thus actually reduce the burdens upon the taxpayers. It will benefit both producer and consumer. It is an economic plan to meet an economic situation, and it should be regarded in that light by the government.

There should be no delay on the part of the government in making its position clear on this question. Seeding time is near, and upon the reply of the government will depend, to a very considerable extent, the area brought under crop this year.

The Government's Program

The Speech from the Throne at Ottawa was well up to tradition. It covered a fairly wide field as a program for one session, but the cautious wording leaves the country as much in the dark as to the actual intentions of the government as it was before.

The heavy fall in prices of farm products in 1921, is referred to as one of the "ill effects" of an "inevitable deflation." If this means that the fall is due to the deflation of credit and currency, the answer of some of the world's best economists is that the deflation was neither so necessary nor so inevitable as to create acute distress. The fact is deflation was conducted at too rapid a rate, and this, taken in conjunction with the disturbed condition of the markets for Canadian farm produce, made it "inevitable" that the farmer would be the hardest hit as a producer. The late government was respon-

sible for both the inflation—which perhaps was "inevitable"—and the deflation, and the plain outstanding fact is that the government interfered to prevent the farmers getting the fullest advantage of inflation and refused to interfere to prevent them suffering from the disadvantages of deflation.

"Adequate markets and marketing facilities and reduced transportation and production costs lie at the root of the problem," it is stated. That is true, as far as it goes, but it would have been more satisfactory to have a definite announcement as to the provision of adequate marketing facilities. If this means that the government is prepared to give due heed to the demand for the re-establishment of the Canada Wheat Board it would have been better to have said so, and rid the western grain grower of an uncertainty that will have considerable influence upon his farming operations this year. If it does not mean re-establishment of the Canada Wheat Board, how long is it going to take the government to announce what it intends to do in connection with this part of the problem of agriculture?

There is the same ambiguity in the references to the tariff. The Liberal platform calls for "substantial reductions in the burden of customs taxation," but the sessional program as outlined in the Speech mentions only "the expediency of making some changes in the customs tariff." The changes may be either upwards or downwards, or they may leave the "burden" just as it is. In any case there is to be no general revision of the tariff this session, which means that the specific reductions promised in the Liberal platform are indefinitely postponed.

The government-owned railways are to be "co-ordinated" so as to increase efficiency and effect economies, but it is not stated whether or not this includes the Grand Trunk. The railway problem, it is stated, is so serious that an enquiry is to be instituted to gather information necessary to a proper appreciation of the bearing of the problem on national economic life. This enquiry is no doubt intended to give the Montreal crowd its chance to show the value and beauty of private enterprise in the running of railways.

In connection with the natural resources of the prairie provinces, Premier King seems to be standing just where his predecessors have stood. There is nothing definite to announce. It is hoped, as it has been hoped by preceding governments, that "a satisfactory settlement" will be reached.

There is no mention of a redistribution bill, and because the government is in a minority and anything may happen during the session, the introduction of a redistribution bill should be pressed upon the government in order that the West may have its proper representation assured in any event.

Efforts for Reciprocity

Although he did not come back from Washington with a reciprocity agreement in his pocket, Hon. W. S. Fielding is to be commended upon the promptitude with which he picked up the policy he involuntarily dropped in 1911 and sought an understanding on the status of the agreement. The time was not the best imaginable for official efforts to renew negotiations on the question, but as the offer contained in the Reciprocity Act passed by the United States Congress has never been specifically repealed, and in fact yet remains on the statute books, it was a matter of interest what the effect would be

if the Canadian parliament accepted the offer as it stands.

In an action taken under another clause of the act, the United States Court of Customs Appeals declared that the Tariff Act of 1913, being a general tariff act, repealed all other tariff acts not specifically continued in force by the new act, but the decision only affected the particular clause under which the action was taken, so that the general question of the validity of reciprocity with Canada remained in the air. The tariff act now before Congress removes the doubt by providing specifically for the repeal of the offer in the act of 1911.

It was doubtless with the intention of getting an understanding on this phase of the 1911 act that Mr. Fielding raised the question in Washington, for an assumption by the Canadian parliament that the offer still remained good might have had very untoward results. In a statement issued after his return, Mr. Fielding makes it plain that members of Congress regarded the act of 1913 as repealing the previous tariff act, and that in consequence the offer of reciprocity had been withdrawn. The statement, however, is encouraging in its evidence that there is no desire at Washington to bar negotiations looking toward a reciprocal trade agreement between Canada and the United States. It is a question of time and circumstances. High protection is in process of being dethroned in the United States. Tariff policy is not the easy thing to settle that it was at the passing of the McKinley, Dingley or Payne-Aldrich tariff acts. Within the past eight years the United States has poured between ten and fifteen billions of dollars into Europe, and as a creditor nation she must accept payment on these loans in goods, for by goods all international indebtedness, as a general principle, is paid. United States tariff policy, therefore, is tending toward greater flexibility, and once the difficulties of the immediate present are out of the way, that is, as much out of the way as general conditions will allow, the chances for reciprocity will become as good as they were in 1911. The general tariff bill now before Congress invests the president with power to negotiate treaties of reciprocity with other countries, and when that bill becomes law Mr. Fielding may be expected to act as promptly as he has just done. It is doubly encouraging to note that President Harding has asked Secretary of Commerce Hoover to gather data bearing on trade with Canada, and that a real interest in the question has been aroused in Washington as a result of Mr. Fielding's visit.

Manitoba Politics

With persistent rumors current of a provincial election in Manitoba this summer, it is imperative that locals of the U.F.M. begin at once the work of organizing for the campaign. It must be remembered that political action is a matter resting with the locals within a constituency, and the running of U.F.M. candidates depends entirely upon the interest shown by the locals. In view of the unanimity shown in the conventions for provincial political action, it is to be hoped that there will be U.F.M. candidates in every rural constituency.

The composition of the present legislature is not satisfactory; indeed, it is dissatisfaction inside and outside the House which is making an election necessary. It has become a habit to refer to the Manitoba legislature as the "horrible example" of the group system. It would be truer to the facts to cite it as an example of the classic idea of the char-

acter of a representative carried to a logical conclusion. Practically every member, on the opposition side of the House at any rate, is a law unto himself. The group system means organization and organized effort; it is just because of the lack of organization and organized action that the Manitoba legislature is not functioning well.

It is in the power of the U.F.M. to correct this undesirable state of things. Representatives of the U.F.M. would form a real group in the House, because they would stand upon the common ground of the principles and policies adopted by the organization. They would not be a group of elected persons coming together after the election and constituting themselves a group by hastily improvising a platform which had never been before the electorate. Candidates of the U.F.M. would come before the electorate upon a platform which has been created by the organization and that would be the bond of the elected representatives, a real democratic bond and not one forged by a party machine. The organization has not gone into politics for the express purpose of acquiring power, but rather that it be an instrument in creating an intelligent and active democracy. The purpose of the organization is to create sound opinions and a responsible democracy, and to secure a representation on public bodies that is capable of adequately advancing and supporting the opinions which the organization evolves as the basis for public policy. If that be kept in mind the U.F.M. group will be all the better prepared should the result of the election be that it will be called upon to form a government.

Letters to the Editor

In response to widespread requests from readers The Guide has decided to open a general correspondence department. In order to carry such a department it will be

necessary to curtail the space given to some other departments, and certain reasonable limitations must be observed by correspondents. From experience we know that a very large number of letters will be sent in for publication, and would ask correspondents to bear in mind the following suggestions:

1. Letters should be confined in length to 500 words in order that as many as possible can be published. Short letters will be given preference.

2. Write very plainly (preferably in ink), and on one side of the paper only.

3. Discuss matters of public interest and not personal questions.

4. No letter will be published unless accompanied by the correct name and post office address of the writer.

5. All letters for publication must be accompanied by a self-addressed and stamped envelope. Receipt will be acknowledged, and the correspondent will be furnished with the details upon which the department will be conducted.

If correspondents will observe these few directions we shall endeavor to conduct the department so that it will be of the greatest interest and value to our readers.

The government of New Zealand has awarded a contract for hydro-electric machinery to a British firm in preference to an American firm, although the American tender was \$70,000 less than the British tender. Premier Massey says the difference in price will be reduced to \$35,000 on account of the difference in tariff duties on British and American goods. That is a curious argument. The government establishes a differential tariff and then says that it helps it to buy cheaper in one place than another because it has put higher duties in the one case than in the other. The plain fact is the taxpayers, in this case, are out \$70,000, and that's all there is to it.

The Daily Mirror, a paper chiefly owned by Viscount Rothermere, a brother of Lord Northcliffe, has been fined \$500 for publish-

ing posters in a by-election in favor of one of the candidates, as the said candidate did not include the cost of the posters in his election expenses, thus violating the law regarding elections. The judge said they could not send the newspaper company to gaol, but if a similar case occurred the servants of the company would be sent to gaol. When they have a law over there they seem determined to enforce it, even if it stops the mighty engine of the press.

For his services at the Washington conference Right Hon. Arthur James Balfour has been made a Knight Companion of the Most Noble Order of the Garter. Having dodged honors of this kind for the last half century, including a fourth offer of a peerage a week or two ago, he has accepted because he could not well refuse, the highest honor in the gift of the Crown, and the Mr. Balfour worshipped by British Tories and respected by all others, becomes Sir Arthur James Balfour. It is true the honor is a signal one, for although the order was established over six hundred years ago it has included only a few commoners, Sir Edward Grey being the only living commoner to share it with Sir Arthur. But that does not alter the fact that Mr. Balfour wanted to remain Mr. Balfour, and it will be by his services during the past few years as Mr. Balfour that he will be remembered, and not by the particular way in which those services have been recognized. His monument is being built in the movement for universal peace.

It is reported that 400 clerks will be laid off in the Department of Militia and Defence. If that can be accepted as an indication of the over-staffing of government departments at Ottawa, it is high time a start was made in weeding out the superfluous in the other departments. The Militia Department costs too much anyway.



She wouldn't be happy with either.

"In the spring a young man's fancy
Lightly turns to thoughts of love." —Tennyson

Silage Crops

Far-reaching Influence of the Silo Program on Farm Returns Not Fully Appreciated.—By W. C. McKilligan, Supt. Dominion Experimental Farm, Brandon

SILAGE crops have a value in agricultural practice quite apart from their wonderful feeding value. This other value may be called their "rotation" value. It is due to the fact that they are grown chiefly as inter-tilled crops. This makes it possible to use them as cleaning crops and to conserve moisture while they are growing. The summerfallow is at present our only commonly-used means of storing moisture and cleaning land. Corn and sunflowers may be used to a great extent as summerfallow substitutes. Grain produced after these crops is much more cheaply grown than it is on summerfallowed land. Summerfallowing means that the land lies idle for a year, giving no return for its use. The grain crop that follows has not only the actual cost expended on it during its season of growth to pay for, but also the use of land and machinery and the work of operating the fallow the previous year. This makes fallow-grown grain expensive.

These statements are not made to disparage summerfallowing. In our dry climate it has been absolutely necessary to summerfallow, and this necessity is likely in a large part to continue. But if part of this land can be used to produce a profitable crop and yet be in as good condition for grain growing as though it had been fallowed, the gain in cost of production is very material and is well worth serious consideration in the present time of severe economies on the farm.

That corn can be used as such a substitute has been abundantly well proven. How sunflowers will serve is not so well established as yet; what evidence there is indicates a less value than corn as a summerfallow substitute but a considerable value nevertheless. On Brandon Experimental Farm corn has been used in rotation experiments for many years. Two adjoining rotations have corn in one and fallow in the other as preparatory seasons for wheat. During the past eight years the yields on these fields have been as follows:

Year	Rotation G		Rotation H	
	Wheat on Corn Land	Bus. per acre	Wheat on Fallow	Bus. per acre
1914	31	32.4		
1915	40	32.2		
1916	15	9.3		
1917	28.2	21.3		
1918	43.3	50.7		
1919	29.5	24.1		
1920	28.8	20.9		
1921	27.3	24.4		
Aver. for 8 yrs.	30.4	26.9		

The cost per bushel of growing wheat on the corn land in 1921 was 70 cents, and on the fallow \$1.34 (these costs include rent of land and other overhead besides operating costs). The figures for the other years are in like proportion. These results are strong evidence toward proving that corn land will produce just as large a crop of wheat as summerfallow will and will do it at very greatly reduced cost.

It would be too much to claim that these crops are equal to summerfallow for weed eradication. In fact where a really serious job of weed eradication is on hand they should not be used. However, after admitting that point,

one can still claim for them great value as cleaning crops. In the dairy districts of Eastern Canada, summerfallowing is never dreamed of. Farms are kept in a creditable state of cleanliness with no other cleaning season except the corn crop. The same can be done in the West quite generally, especially as the silage crop would replace only part of the fallow and might be placed on the less dirty land, leaving the heavy end of the clean-up to the fallow.

Comparison of Crops

Corn is the standard silage crop. Wherever it can be grown successfully it is adopted without question. In much of the province of Manitoba it can be grown successfully, and probably also in very considerable areas of the other two prairie provinces. An average yield of from six to twelve tons of silage per acre may be expected from corn in this climate. Occasional yields as high as twenty tons are reported.

Sunflowers are the silage crop of

is not now a success. Where both corn and sunflowers are grown, they should be grown separately, and mixed by putting alternate loads into the silo.

List of Substitutes Long

Oats for silage are grown satisfactorily in many northern districts where corn is not a success. Peas or vetches, or both, may be grown with the oats to improve the feeding value. From a feeding standpoint probably this mixture is the best substitute for corn that there is. However, from the farm management standpoint, it does not fill the place at all. It is simply another grain crop, cut green it is true, and, therefore, of some value in weed control but in no sense a summerfallow substitute such as the inter-tilled crops.

Many other crops may be used for silage. Any cereal crop may be ensiled successfully if cut at the right stage, and will make good feed. They are not, however, silage crops in the ordinary sense, and their use in this way would be for the pur-

better way than to plow it in in a well rotted condition for corn. It should be plowed comparatively shallowly, about four inches, so as to leave it within easy reach of the roots of the corn. A good seed bed should be prepared before the seed is planted; no definite instruction can be given as to what operations are best suited to prepare this seed bed, they must be suited to the character of the soil. The more weed eradication that can be accomplished before and at the time of seeding, the easier it will be to keep the corn clean during the summer.

Corn does best when planted about May 20 to 25, earlier than that is too risky for frost, later planting shortens the season, though good results are often obtained from planting up to the first few days of June. Sunflowers are hardy to frost and may be planted as early as wheat.

The largest yields may be obtained by planting in narrow rows, but the value of the crop as a summerfallow substitute is lessened thereby. Rows three feet or three feet and a half apart will yield nearly as much as closer rows and will produce a better quality of fodder and permit of cultivation more nearly approaching a summerfallow. In considering whether corn should be planted in continuous rows or in check rows there are points in favor of each to be reckoned with. Check rows allow of cross cultivation, and, therefore, of much more complete weed destruction; they also result in more ears on the corn. Continuous rows may be sown by an ordinary grain drill, thus dispensing with the necessity of the purchase of an extra implement. Sunflowers sown in hills are very hard to cut, and are much more easily handled when in continuous rows.

Summer Cultivation

The cultivation between the rows during the summer is to keep down weeds. The importance of the surface mulch

has been greatly exaggerated, probably the tearing of roots does more harm than the mulch does good. But weeds waste moisture and plant food, and must be kept down if the crop is to serve as a summerfallow substitute. Frequent cultivation is usually necessary for this purpose, especially early in the season. When to cultivate can best be determined by watching the development of the weeds, and cultivating to keep them closely in check. Harrowing as the corn or sunflowers are coming up will often kill many weeds with little damage to the crop. Again when it is about six inches high, harrowing can be done if there is a good, thick stand that can stand a little thinning.

The cutting of corn must be determined by the average date of first frost in a district. It should get as long as possible to mature but should not be allowed to freeze if it is possible to avoid it. At Brandon, September 5 to 7 is found to be about the right date for cutting corn. If unusually early frost comes, the corn should be cut as quickly as possible. If cut quickly the loss from freezing is not serious, but if it dries standing, the lowering of feed value is serious. Sunflowers are



Thirty tons of sunflowers to the acre in the Red River Valley

next importance to corn. It is believed that this crop is going to be of very great value in Western Canada. It will withstand frost very successfully and hence is well suited to the areas where the season is too short for corn. As there is a considerable portion of Western Canada, where corn is never a success and still larger areas where it is sometimes a success but is not dependable, sunflowers should be of great value. They outyield corn anywhere in the West. Here at Brandon the difference is not very great, perhaps fifteen to twenty-five per cent, but reports from Alberta indicate double the yield from sunflowers as compared with corn. Yields of over thirty tons per acre have been reported in some instances.

As has already been indicated the value of sunflowers as a preparation for grain is not fully proven, but appears to be rather less than corn. Its feeding value is also somewhat less than corn. It is, therefore, supplementary to corn as a silage crop rather than a serious rival. It may be grown to advantage as part of the crop in districts where corn is usually satisfactory but is not entirely dependable, and it may serve to greatly extend the silage-growing area into districts where corn

pose of meeting some unusual emergency. Grass crops can also be ensiled if desired, but are usually preferred as hay. Leguminous hay crops such as alfalfa and sweet clover make a strong flavored silage when stored alone, but mixed with milder flavored crops, such as corn, cereals or grasses, make good silage.

Many kinds of weeds make good silage. Wild oats, Canada thistles, sow thistle, quack grass, and Russian thistle, all make from fairly good to first class silage. While no one would grow them for the purpose, the fact that they can be used in that way may sometimes be worth knowing.

Methods of Growing

In discussing the handling of silage crops we will consider only the inter-tilled crops: corn and sunflowers, and the advice given will be based largely on experience with corn.

In Western Canada, these crops will usually be planted on land that has grown grain for two or more years. They will succeed on such land provided it is not too badly infested with weeds. Fall or spring plowing is a matter of local experience, one being better in some localities and the other in others. Manure can be used in no

It will be my object in this article to place before the reader some information regarding the machinery which is used to a very considerable extent in connection with the crops that are used for ensilage. The different phases of the work will be considered in the following order:

1. Seeding machinery.
2. Cultivating machinery.
3. Harvesting machinery.
4. Machinery used at the silo.

Seeding Machinery

In the West at the present time I am informed that the best results are obtained by the sowing of corn in drills, and therefore the ordinary grain drill can be used by closing up seed cups that are not required. In the corn belt where it is the leading crop the corn planter is used. It is customary to "check row" the crop by means of a wire in rows for cross cultivation. The modern corn planter is a highly developed machine, which will deposit in hills two, three or four kernels of well graded corn with an accuracy that is uncanny. There are two types of dropping mechanism, the full hill, where a seed cell is provided that is large enough to hold the desired number of kernels for one hill, and the cumulative drop, where one kernel is selected at a time, the cells being large enough for one kernel. In the full hill plate it is easy to find four kernels small enough to fit the three-kernel cell, or two kernels large enough to fit the three-kernel cell. Therefore the cumulative type of seed plate seems to be preferred. However, the common grain drill gives good results, and will not be replaced very extensively until this crop is grown on a larger scale in this country.

Cultivating Machinery

Practically every machine company is awake to the fact that there is a growing market for single and double row cultivators throughout the West. A corn cultivator has a spread arch which allows the machine to be used on the crop until it attains quite a height. They can be equipped with different kinds of cultivator shovels. Many ingenious devices are found on them to prevent any damage to rows which are not sown as straight as they might be. Some have a pivotal axle, some pivotal poles, while others are guided by the feet of the operator. Fenders are also provided to protect the growing crop.

Harvesting

Several methods of cutting are now generally followed: By hand; with a horse cutter drawn as a sled or on wheels between the rows; with a corn binder; and with a corn shocker. In the Northern States the corn binder is very widely used. The stalks attain a height of from five to nine feet, and are cut and bound very satisfactorily by means of corn binders. In the extreme North, where the stalks are but five feet or less, a wheat binder is sometimes used in cutting and binding the corn crop. The use of the wheat binder for this

Silage Machinery



By Prof. J. Macgregor Smith

purpose, however, is not recommended, because the machine is not built for such heavy work. On the river bottoms of the Central and Southern States, where the stalks are large and attain a height of 12 or more feet, with the ears six feet or more from the ground, the corn binder does not meet with general favor. Doubtless binders constructed for just such crops as these would meet with greater favor than the binders designed for corn of average height.

The method of cutting is governed not only by the height of the stalks, but also by the quantity of corn to be cut. Where farms are small, and the area to be cut is less than 20 acres, cutting by hand, or by such a cutter as is shown on page 41, is found more profitable than maintaining expensive machinery for the purpose. Where a large acreage is to be cut during the limited time within which it is most profitable to cut corn, corn binders or corn shockers are necessary, and are the most economical means of harvesting.

Corn Knives

The use of corn knives is advisable only on very small jobs, and then only when sled harvesters or corn binders are not available. When hand knives are used, the corn may be temporarily shocked, thrown on to the ground, or

laid directly upon the wagon to be hauled to the silo.

Sled Harvesters

The sled harvester is probably the cheapest of the three methods mentioned for cutting corn, but because it is such hard work for the men on the sled to catch the corn, the method is not popular. Bulletin 173, Office of Experiment Station, United States Department of Agriculture, states that it costs \$1.18 to cut with the sled harvester. A short test at the University of Alberta farm showed the cost was \$1.28 per acre for cutting and loading. Two men were able to harvest and load a ton every ten minutes at a cost of about 17 cents, but since they worked only about two-thirds of the time, 40 tons or about five acres was a good day's work.

In using this machine most efficiently, the wagons used in hauling must be driven alongside the cutter and keep pace with it, so the workmen can lay the corn directly on the wagons; otherwise the corn must be picked off the ground. It has been found that it costs about 10 cents per ton to lift the bundles from the ground to the wagons.

Corn Binders

Although it is fully as expensive and probably more so to cut corn for silage with a corn binder than by any other method, it no doubt is the most satis-

factory, and the method to be most highly recommended.

Since seven and three-quarter acres per day is about the average amount cut with the corn binder, the farmer who is planning his work for filling the silo should estimate the tonnage per acre his corn will yield, and if he finds that one harvester will not keep the silage cutter supplied he should cut a day or so in advance, or have two or three corn binders in the field at once.

It would seem that where five or 10 acres has to be cut that a sled harvester would be more reasonable than a corn binder, which is rather an expensive machine although a very efficient one. I cannot say how the sled harvester would cut sunflowers which are usually very woody. It seems that

the knife would have to be up higher. The corn binder will handle corn and sunflowers equally well. An accompanying photograph shows one handling sweet clover, the stalks of which were as hard as wood. Notice also the power bundle carrier.

The Silage Cutter

The silage cutter although somewhat of an innovation for Canadian farmers is really a very simple piece of machinery. A silage cutter's business end is the throat or mouth. The cutting should be done by two knives, the revolving knife on the flywheel and the stationary or mouth piece knife. Silage cannot be cut too fine, the finer it is the more closely will it pack. Ragged cutting means poor packing, therefore it is essential that knives be kept sharp and run close to each other in order to produce a clean shearing cut. Most silo operators pay sufficient attention to the flywheel knife, but seem to neglect the mouthpiece.

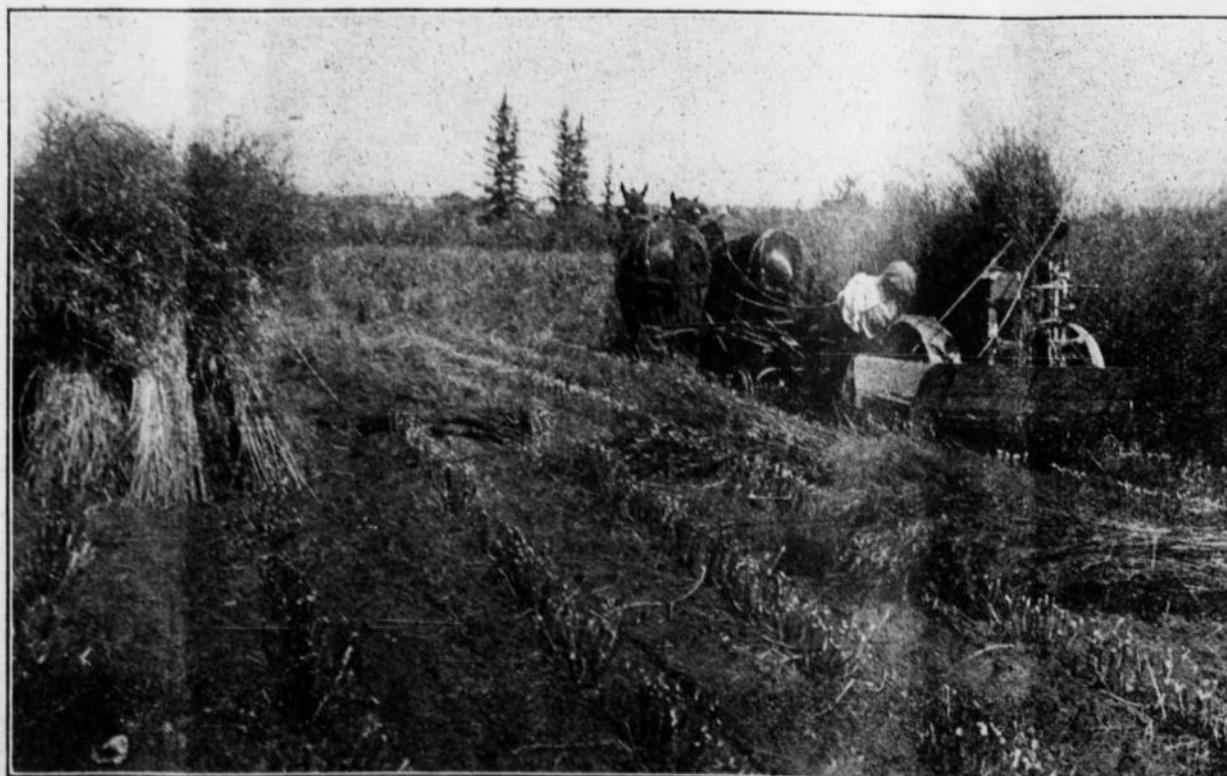
Knives should be changed every two and one-half hours, at least where the heavy type of knife such as the Blizzard cutter uses is used. The strain of working with dull knives is terrible and the surprising thing to us is that cutters stand up the way they do under such use.

The knives must be so adjusted that the full benefit of a close shear cut will be realized. This adjustment must be changed with the direction of pull on the belt. Though it is always desirable

to place the power plant so that the belt pulls "toward the mouth piece," sometimes it is necessary to set the engine on the other side of the box, this will pull the knives away from the mouth piece, the amount depending on the slackness in the main bearings. The knives must be adjusted closer in this case. When the next set in the other direction is again made, the adjustment must be changed before starting, else serious damage may result.

Other adjustments and replacements which are due the silage cutter by way of preparation are examinations of the gears and feeding mechanism. Frequently corn is cut and rained on. This causes it to be very sandy and gritty. The grit gets into

Continued on Page 41



This corn binder is being used to cut a sweet clover seed crop. Note the power bundle carrier.

From the Feeder's Viewpoint

WITH the increasing interest being taken by Western farmers in the raising of all classes of livestock the problem of winter feeding comes more and more to the fore. That summer conditions are ideal for livestock of all classes and ages no one will dispute, hence the desirability of fully understanding what are the controlling factors thereof. We believe that these are nothing more or less than fresh air and an abundant supply of nutritious, succulent feed. Most farmers already know something of the value of roots in lending this all-necessary succulence to a ration; many as yet, however, know little about the possibilities of silage in this regard.

Silage belongs to that class of feeds known as roughage, which includes all the coarse parts of a ration, such as hay, straw, fodder corn, etc. It differs, however, from most other forms of roughages fed during winter, in the respect that it possesses succulence or juiciness—an essential attribute where one is concerned with maintaining the milk flow or the vigor and thrift of growing animals. The value of succulence in a ration cannot well be overestimated nor yet can it be measured in terms of food value. We know from our own experience the value of some succulent material for maintaining the human body and digestive system in good condition and stimulating the appetite. In summer we consume quantities of vegetables and fresh fruits and consider such indispensable; in winter in every well-ordered home these in their canned form supply the craving for something succulent. Now, what fruits and vegetables are to us, silage is to our livestock. Apart from its food value—of which it has considerable—silage is, therefore, invaluable as a "conditioner."

Feeding Value of Silage

The nutritive value of silage varies to quite an extent according to the kind of crop from which produced, but since the main silage crop is corn, we may take the following table of composition from Henry's Feeds and Feeding, as showing an average analysis of silage and some others of our commoner roughages:

Feed	Total dry matter	Protein	Carbo-hydrates	Fat
Corn silage	26.4	1.4	14.2	.7
Mangels	9.1	1.0	5.5	.2
Fodder corn	57.8	2.5	34.6	1.2
Pasture grass	20.0	2.5	10.1	.5
Upland prairie hay	93.5	4.0	41.4	1.1

It will be noted that about three-fourths of the total weight of silage consists of water, that it contains about three times as much total dry matter as roots, but little more than half of which is digestible and that it contains a large amount of carbohydrates in proportion to protein.

For these reasons it gives best results when fed in conjunction with some other feed richer in protein and dry matter, as, for example, alfalfa hay.

Sweet and Sour Silage

The kind and maturity of crop and the manner of filling silos are the factors which determine the ultimate quality of silage. Very immature crops yield a wet, sour silage which plays havoc with the digestive system, causing incessant "scouring" and general derangement.

The reason thereof is the presence in immature plants of undeveloped starches or carbohydrates which are acted upon by bacteria, yielding excess of lactic and other acids.

This explains the rather indifferent results which in isolated instances have attended the feeding of silage. It is possible of course to have some crops too mature for ensiling

The Value of Succulence in a Ration--Sweet and Sour Silage--Frozen Silage--Suitable Quantities for Various Classes of Stock--By Prof. J. M. Brown

purposes. Such, for example, is sunflower which, if even 75 per cent. mature, is much too fibrous or "woody." Corn on the other hand cannot be too mature, the best silage being obtained from same when ears are in the glazed stage. With very mature corn it is sometimes necessary to use water when ensiling, otherwise it does not pack in the silo sufficiently to exclude air, resulting in pockets of mould being developed. For the same reason when filling, corn should be very thoroughly tramped and leaf and cob evenly distributed over the silo surface.

If the cut corn is tramped in, as deposited by the blower, the cobs will be all on one side and leaves on the other. The leaves being light are difficult to compact properly. Wherefore there is great danger of all of this side of the silo going bad.

Frozen Silage

Under our conditions silage will freeze in any silo, the extent of freezing depending on the type of silo and the kind of crop ensiled. The feeding of frozen silage however is not so injurious as many imagine it to be. It is true of course that, fed to dairy cows in full milk with systems relaxed and highly susceptible, it may very quickly upset the digestive system, but in the case of dry cows and young stock some frozen silage may be fed without danger of injury. It is none-the-less advisable to throw frozen material removed from the walls of silos aside in the stable or feed room, to permit of same thawing out before feeding.

Comparative Uses

Silage finds its best use fed to cattle, although under certain conditions it may be fed advantageously to sheep and even horses.

Spring-calving beef cows may be brought through the winter very cheaply and suc-

cessfully on 30 to 40 pounds of good silage, together with five to eight pounds of hay or other form of roughage. Fall-calving cows require some grain, but silage stimulates the milk flow, resulting in better-grown, more vigorous calves in spring. Heifers should have all the silage they will consume, which with alfalfa hay makes a complete ration but with the low-grade hays some grain is required.

Bulls may be very easily overfed on silage. The mistake is frequently made of endeavoring to maintain the herd sire in thin breeding condition by feeding an excess of roughage and little or no grain. Male breeding animals should not, it is true, be maintained in too high a condition, but on the other hand excessive feeding of roughage leads to impairment of vigor and occasionally to complete impotency.

Again an excessive quantity of silage may in the case of bulls induce such distension of the abdomen as to render coition impossible. There is no particular reason for feeding silage to bulls other than to keep the bowels in good condition and for this purpose a ration of 15 pounds daily is sufficient.

Silage for Dairy Cattle

The problem of maintaining the milk flow towards the end of summer is one with which most dairymen are familiar. It is the most trying season of the year; pastures become dry and burnt, there is a marked decrease in the milk flow which, having once been allowed to occur, no amount of liberal feeding later can restore. Supplementary grain feeding alone avails little, it is some succulent which is required to take the place of grass. A satisfactory sequence of temporary pastures has not yet been devised and soiling crops entail considerable labor. Silage we believe is cheaper and certainly much more convenient to handle.

Failing a small silo for summer use silage should always be prepared in excess of winter requirement. That which remains in spring

may be preserved against the time of need by covering with several loads of chaff or cut roughage and soaking with water.

Silage for Sheep

A few disastrous results are responsible for a certain prejudice against the use of silage for pregnant ewes. Sheep are much more susceptible than cattle to injury from damaged feed. Silage containing pockets of mould fed to pregnant ewes may prove very harmful, but when sound and fed in quantities not exceeding four pounds per head per day it is an efficient, economical roughage for bringing ewes to the lambing with plenty of milk and assisting in the production of vigorous healthy lambs.

Silage for Horses

Horses again are more susceptible than sheep to injury from mouldy feed. For the reason, therefore, that even in the best of silage pockets of mould may develop, it cannot be considered a safe feed for horses. Roots are valuable for toning up the digestive system of horses, and silage, could it's soundness be relied upon, might be used in place of roots for this purpose. Until fuller knowledge is gained, however, of the control of moulds in silage it is perhaps best considered as an unsuitable feed for horses.

Silage for Hogs

Its bulk, high fibre content and low percentage of digestible nutrients render silage quite unsuited to the digestive system of hogs.

Rates of Feeding Silage

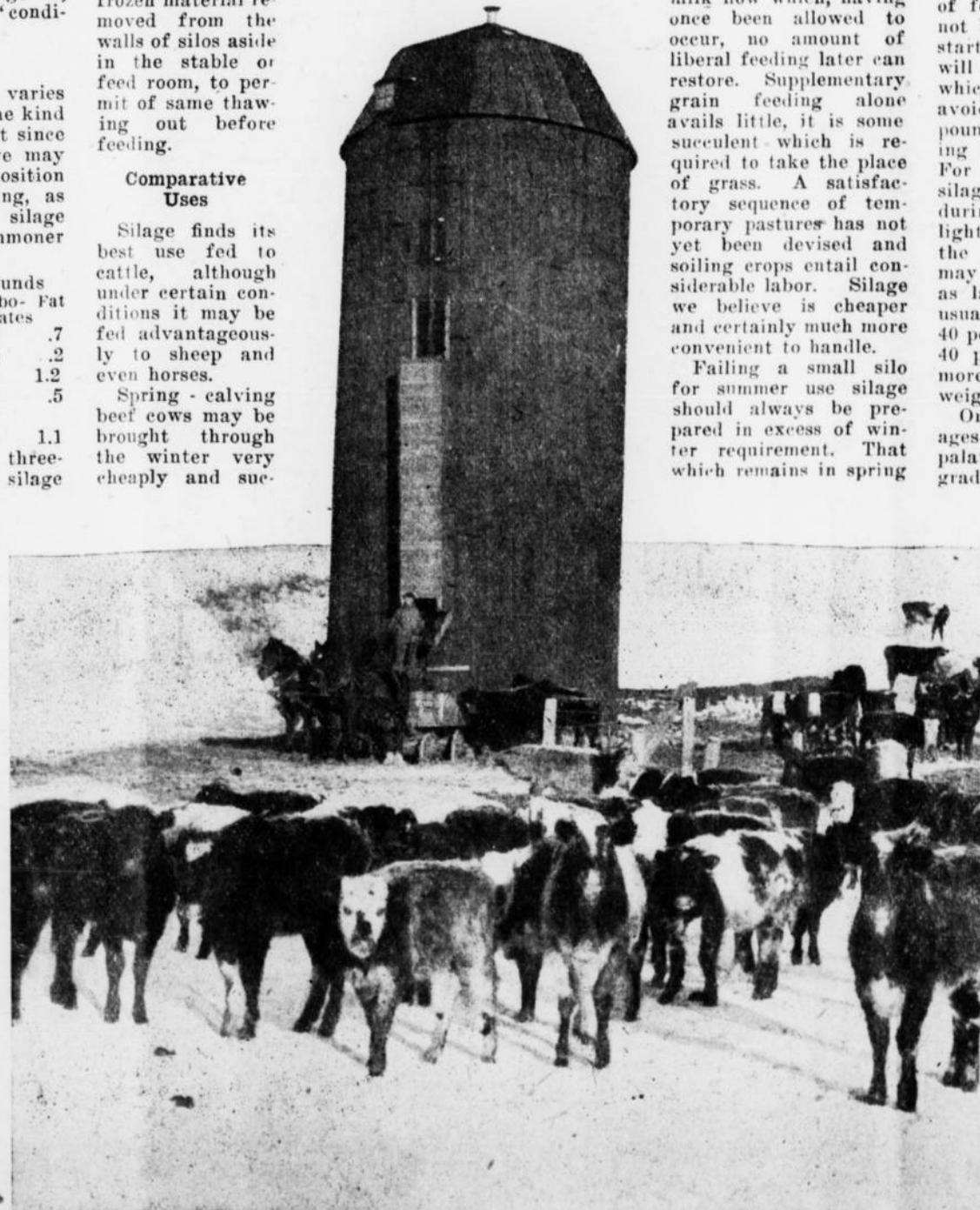
Many factors must be taken into consideration in determining the rate of feeding. Feeder steers which have not been accustomed to silage must be started very easily, otherwise scouring will result and consequent set backs which the feeder is most anxious to avoid. Under the circumstances 20 pounds per day may be sufficient, working up to the maximum of 35 pounds. For the best results in a long feed silage is best fed heavily with less grain during the first part of the period and lighter with heavier grain ration during the latter part. Breeding-beef cows may receive the succulent in quantities as large as they will clean up which usually means a consumption of 30 to 40 pounds. Dairy cows consume around 40 pounds of corn silage and slightly more of sunflower by reason of greater weight for equal bulk.

One of the most outstanding advantages of silage is its ability to render palatable and acceptable much of low grade roughage—wild hay and straw—which would not otherwise be consumed or find a market. By chaffing and mixing several hours before feeding with silage the otherwise unpalatable roughage is rendered palatable.

Silage in a Balanced Ration

It is well to bear in mind that silage is comparatively deficient in protein. It therefore gives best results when fed in conjunction with leguminous roughages such as alfalfa, clover, vetches and pea straw. In feeding for milk production it is particularly necessary to remember this since a sufficiency of protein is essential if cows are to maintain their milk flow for a reasonable time after freshening. Where silage is fed, therefore, in conjunction with ordinary low grade roughage, the ration for milk production should be balanced with such protein concentrates as bran and oil cake meal.

Slowly but surely the silo in Western Canada is coming into its own, and doubtless, as its advantages become better understood, it will come to be regarded as a necessary part of equipment on every mixed farm.



Range calves wintering on silage at Round T Ranch near High River, Alta.

News from the Organizations

Disputes as to Grade

Several complaints have recently reached the Central office of the Saskatchewan Grain Growers Association of substitution of special binned grain at country elevators. In each case the farmer has believed that the grade which the car of wheat shipped in his name received at Winnipeg was lower than that of the wheat he delivered to the elevator company, and there is reason to believe that all too often, either by accident or design, the identity even of special binned wheat is not preserved. Also the farmer often thinks that he has special binned when the contract or ticket given him by the operator is marked "subject to inspectors' grade and dockage," and there is no intention of keeping his wheat by itself.

Take a Sample

In every case where wheat is delivered without the grade being agreed upon, and whether special binned or not, the farmer has no protection unless he assures himself that a proper sample from each load delivered has been preserved under lock as provided by section 167 of the Canada Grain Act. He cannot, of course, know absolutely that a car loaded in his name, and purporting to contain his wheat, actually contains what he delivered. Unless a proper sample is preserved, as required by law, he has no way of proving that the grade the car took was the grade he delivered, and, therefore, he should at all times see that a proper sample is taken, and provide a padlock to lock the sample box which the operator must provide, the farmer keeping the key.

Farmer's Remedy

If a farmer believes that the car graded as his wheat was not his wheat, he must notify the operator in writing stating his belief, and demand that the sample be sent to the chief inspector at Winnipeg. If a proper sample has not been kept the operator must pay him for the grade which he believes his wheat to have been. Paragraph 9, page 27, reads: "If the elevator operator fails at any time to draw and preserve such sample in the manner stated herein, the owner or operator must account to the owner of the grain for the grade designated by the said owner."

Of course "an ounce of prevention is worth a pound of cure," and farmers would save themselves much loss and inconvenience if they would use the protection they have under the Grain Act. About no other phase of the grain business is there so much complaint as about grading at country elevator points. A day or two ago the writer saw a letter from a farmer who says the association has done nothing to help the farmer on this point. Yet the farmer can secure the official grade on every sale of grain made if he will. No one can help him if he will not avail himself of the protection the law affords.

"Dr. Joe's" Remarks

"Dr. Joe," whatever his actual identity may be, is evidently not only a keen critic, but also a deep observer, whose observations and conclusions are worthy of attention. About the time of the Saskatchewan Grain Growers' convention he took a trip southward from Biggar on his "old metal monoplane," and called in at the convention to see what was doing; and this is what he has to say with respect to one phase of the proceedings:

"No one regrets more than I the heavy propaganda to kill the G.G. off by mud-slinging the executive. A little reflection and investigation will make clear that much more radical and dangerous organizations will spring up if this foolish, short-sighted propaganda succeeds. Near-sighted destructors may live to curse their feeble-minded philosophy."

Another instance of "Dr. Joe's" clear-sightedness is seen in the paragraph which follows:

"Maharg was in fighting trim, and you only have to listen to his open,

Reading matter for this page is supplied by the three provincial associations, and all reports and communications in regard thereto should be sent to H. Higginbotham, sec'y, United Farmers of Alberta, Calgary; J. B. Musselman, sec'y, Saskatchewan Grain Growers' Association, Regina; or W. R. Wood, sec'y, United Farmers of Manitoba, Winnipeg, and not direct to The Guide office.

clear-cut statements to sense the cause of the great faith the rank and file of farmers place in him."

Well Done, Warnock

The Warnock local of the Saskatchewan Grain Growers' Association has been having a membership drive. That it has been worth while is evident from the fact that while the membership of the local in the year 1920 was only 29, and that of the past year even less, the total has been increased to no less than 70. Strenuous efforts were no doubt put forth to attain this result, but it shows unmistakably what enthusiasm can do, and, incidentally, it shows also the amount of expansion that is possible when the work is gone about in the right way.

There is, however, another pleasant feature in connection with the drive. This is that the fees of the local have been paid in to the Central office in full for the year, the balance of \$31 having been forwarded when making the report of the drive. It would be refreshing if all locals of the association could be induced to do likewise, and would save the Central office a very substantial amount in a year's time, which now has to be expended in reminding locals of their duty. Much could be done in this way to place the finances of the association on a sound basis, absolutely without cost to the locals.

The Warnock people are to have a celebration on March 17, an appropriate date, no doubt selected because it happens to be the feast of St. Patrick. There will doubtless be great rejoicing at the success which has attended their efforts.

U.F.M. Relief Fund

No better work is done by the U.F.M. than that of relief of needy families in the country. The calls are more frequent and urgent this winter than ever, and the fund is lower than it has been for several years.

Families are needing food. Some are found that have not had flour for weeks—living on vegetables—and clothing is in constant demand. In most cases we secure the actual supplies, but there are cases which require that we should have money. If every local could put five dollars into this it would be invested for the good of Manitoba. It is worth doing now.

Russia's Need Still Greater

Some of our people heard the appeal

for the millions starving in Russia at the convention. The descriptions of eye-witnesses are heartbreaking.

There are some of our locals—not all—but some, that could well afford to make some contribution to this work. Some could still be saved. If they were your boys and girls you would hope that someone would come to save them. Can your local do something?

Contributions forwarded to Central, 306 Bank of Hamilton, will be handled through the Russian Red Cross Society.

Ministers Reply to Resolutions

Hon. Charles Stewart, minister of the interior, writing to H. Higginbotham, provincial secretary of the U.F.A., with reference to the resolution passed at the annual convention urging the desirability of carrying on irrigation and development work in the province, particularly in the south country, in order to accelerate the development of irrigation and to find work for the unemployed, says:

"The season is now so far advanced that it will be impracticable to undertake field survey work before spring, but it is my intention to have the work of surveys and investigations continued energetically as soon as weather conditions will permit."

Marking of Goods

Hon. J. A. Robb, minister of trade and commerce, writes with reference to resolutions forwarded to him from the annual convention:

"The Marking of Imported Goods. You are perhaps aware that the late government had a provision in the Customs Act requiring certain markings to be made on all imported goods. So strenuous was the opposition that the operation of this act has been several times postponed, and I may say that this action would not have been taken except for very excellent reasons and difficulties which were not contemplated when the act was prepared. This whole question, however, is now under consideration by the present administration, and I cannot yet say what is likely to be done."

Gasoline Standards

"With regard to your complaint with respect to gasoline, I may say that the Department of Customs and Excise have certain regulations respecting the quality of gasoline imported into Canada, and there is also the Petroleum Inspection Act, which is administered by the same department. The question of the inspection of gasoline is one for

which the Department of Trade and Commerce has no jurisdiction, though a study was made of the difficulty some time ago, in order to arrive at a gasoline standard, but the difficulties were very great, in view of the fact that the weight per gallon varies considerably for gasoline under changes of temperature. It is commercially impossible to keep correcting the weight per gallon for changes of temperature."

Give Car-load Potatoes

Another contribution from northern farmers towards relief work in the drought area is being made by the Sprucefield local of the U.F.A., whose members are making arrangements to ship a car load of potatoes for this purpose.

Bow River M.P. Honored

Members and friends of the Rumsey U.F.A. local gathered recently to do honor to their former secretary, E. J. Garland, M.P. Mr. McNaughton, the president, was in the chair. There was a short program, including several humorous songs and a short address by J. Lewis Smith. Mr. Smith paid a tribute to Mr. Garland's splendid work in the organization, and commented on his tremendous popularity in his own district. After a few musical numbers, R. Geurvitch, vice-president of the local, presented Mr. Garland, on behalf of the members, with a set of pipes and a handsomely illuminated address, appreciating his services as secretary of the local and complimenting him on his election by a majority unprecedented in the constituency. Mr. Garland expressed his thanks briefly, amid the enthusiasm of his fellow members and neighbors.

Cards, refreshments and dancing, for which Misses Aker and Stafford and Messrs. Kordalk and Smith supplied excellent music, completed a very delightful evening.

The Labor Problem

The members of the Vanguard local of the Saskatchewan Grain Growers' Association are tackling the problem of farm labor in earnest, believing, evidently, in the truth of the statement that Providence helps those who help themselves, and, incidentally, they are making it a means of increasing the membership of the local. In writing the Central office, the secretary, George Payne, says:

"Just a line to let you know that we are still alive here at Vanguard. Our annual meeting was held on February 2 and fairly well attended, and a considerable amount of business was done. Owing to the trouble we had last harvest and threshing with the farmers over-bidding each other for help, after the government coming to our aid and setting the price at \$4.00 per day, we thought perhaps it would help matters considerably, even if it did not altogether put an end to such trouble, if a resolution was passed at our meeting to appoint a labor secretary in connection with our local here. His duties are as follows: To secure any applications from all farmers in the district that will need help, and to meet each train and hire all men and place them at the various places on his list, a price to be set and that price paid only. Each farmer when making application, if not already a member, must pay a membership fee and join our local, which we think is only fair. I just thought I would mention this, as it might perhaps help to try it out in some other locals in the province."

The Organization Department replied as follows: "Your letter of February 5 duly received by us, and we are very interested indeed in the steps which your local has taken to deal with the labor situation in your community. We shall be very glad to have a report from your local later on as to the way in which your experiment has worked out. If only the farmers of your district will realize what a work your local is doing for them and will get behind the effort, we see no reason why it should not be a real success."

Manitoba's Re-establishment Year

The Aim for 1922—Two Hundred Dollars Saved in Every Local—Every Local's Membership Up to Full Strength

The organization campaign in Manitoba is going well. A good many locals are considerably above last year's record.

It must be followed by practical getting together and unifying activity in every local.

Here is a practical plan, based on practical facts, which your local can work:

The Central office in Winnipeg is sending out material for a Co-operation Night in every local before seeding.

Your local board is asked to plan for making that night a real getting together for discussion of two things:

1. What locals have done within the past two or three years in saving money through co-operation.

2. What plans you can adopt at once for saving from \$100 to \$3,000 within a twelvemonth.

Every local has a chance in this race. Every one could save at least \$100 for its membership.

Do you realize that that would mean

over forty thousand dollars saved to Manitoba farmers? And if the average ran as high as it did in the 61 locals that went in for co-operation last year it would mean \$148,000.

This is not a dream. It is surer than political action. It is surer than the Wheat Board. It is surer than reduction of railway rates to the 1917 level. This has been tested and proved. It cannot fail excepting from lack of action and gumption and the co-operative spirit.

Will you see to it that your local board prepares for a full discussion of the co-operative possibilities in the light of special information which will be sent your secretary about March 21?

If your nine officers can really save you farmers even one hundred dollars this year, surely it is worth while going after!

Set your Co-operation Night, if possible, between March 21 and 30, and look for the special material from Central, which will help give you definite lines of suggestion.

Here's Insurance Against Drought, Crop Failure and Low Prices!



Don't go "broke" through low prices of farm produce—
Become Prosperous! Drought has little effect on a silage crop, and a failure is unknown.

Silage has proved to be a money-maker to the farmer producing milk or beef. It increases the milk production—it doubles the value of beef stock by producing higher grade beef and more weight—and it cuts the feed cost in half.

Silage saves acreage. Five acres of sunflower silage will winter 20 head of stock, keeping them in prime condition and at top production.

Silage is one of the cheapest foods to produce and yet most valuable to feed. Sunflower silage can be sown, raised, cut and stored for less than \$2.00 per ton; and sunflowers will grow in any Western Canada soil.

There's an Authority on Silage in Your Own Town

The best advice you can get on silage and silos is from actual users in your own district.

Your local lumber merchant is thoroughly familiar with silage. He will tell you which is the best crop for your district—and why. He will tell you how to sow, raise and store it. He will give you the names and experiences of men right in your own district who have raised silage during the past few years, and who have made money despite the low prices paid for farm produce.

Get all the information you can about silage crops and silo construction. See your local lumber merchant, or write direct to the

Your Insurance When Buying a Silo Locally is—

Permanent Silo Satisfaction.

Your local lumberman will be on hand to see that your silo is properly erected—an important point.

Your local lumberman is interested in your success—he is at your service when you want him.

Your local lumberman can, and will, give you accurate information on silage conditions right in your district.

When you buy a silo locally you put money into circulation that makes for prosperity in your district.

When you buy locally you save money on the cost of your silo by obtaining the advantage of car-load freight rate on the silo you buy.

*—You Insure Increased
Profits and
Silo Satisfaction.*

Western Retail Lumbermen's Association
407 Scott Block

Winnipeg



Gary Trucks

MADE IN CANADA

To meet the demand for a reliable, economical, all-purpose truck for farm use

Everywhere it is now recognized among farmers that the motor truck is the solution of hauling and transportation problems. And for many years the Gary Truck has been proving its worth to truck users and farmers south of the line.

The new Canadian Gary Truck is the same model, and the equal, if not the superior of the U.S. truck, with the additional advantage of being made in Canada by Canadian workmen, with all the thoroughness and reliability and guarantee of wear and service that THIS IMPLIES.

The Gary Truck capacities range from one ton to five tons, and all models are made to stand the work that the farmer demands of his equipment.

THE GARY 1-TON EXPRESS ESPECIALLY IS PRICED AND BUILT TO MEET FARM REQUIREMENTS

\$1495.00 F.O.B. TORONTO

Completely Equipped with Electric Lights and Pneumatic Tires

GARY WILL SPECIALIZE ON SERVICE

Very extensive plans are being carried out to give Gary Truck owners a service that is second to none. Service stations are being established at a great number of points, and a large supply of parts will be kept on hand at each point. This means that truck owners will be able to keep their truck constantly in use and avoid the delay and inconvenience of having them laid up for repairs—a special feature in Gary Truck favor.

DEALERS WANTED

A number of territories are still open for live dealers who wish to tie up with a truck of proven ability and a Canadian Company that is getting after business in a big way. If you think you can qualify, write or wire at once, so that our Sales Director, Mr. Holleyhead, may make final arrangements on his trip west.

CHASE TRACTORS

To be made in Gary Plant. The well known and popular Chase Tractor will be made in our plant.

Gary Motor Truck Corporation of Canada

Head Office and Plant: **LIMITED**
Atlantic Ave.

TORONTO CANADA

DAIRY FARMING

Slowly but surely the business of dairy farming is gaining a foothold all through Western Canada. The man who starts with one or two dairy cows never looks back—he is the man who adds to his bank account every week in the year.

FOR SERVICE AND QUICK SETTLEMENTS SHIP YOUR CREAM TO

TUNGE LAND CREAMERY CO. LTD.
BRANDON MANITOBA

THE CRESCENT CREAMERY COMPANY Limited and the CRESCENT PURE MILK COMPANY Limited

are gratified to know that the farmers of Western Canada are taking a keener interest in the subject of SILOS. The legitimate development of the dairying industry necessitates the construction of SILOS, and more SILOS. Dairying is destined to play an important part in the agricultural program of the future. Everything which tends to promote that industry has the cordial support of these Companies.

Some Shirt-sleeve Opinions

The Guide asked 125 Silo Owners to declare For or Against the Silo as a Paying Proposition. Of all the letters received there was not one negative answer.

Corn-Silage Combination Ideal

Harding, Man.

Before answering the question, Is a silo a paying investment? you must first answer the question, Is corn a paying crop? From my experience I answer decidedly yes. Corn will yield more feed per acre than any other crop we grow, and it is relished by cattle, horses, hogs and poultry, and we even have the prairie chickens flocking to the yard where we throw off the fodder corn for the stock running out. Second, corn land produces a better and cleaner crop of wheat than a summerfallow, and it will not drift in the spring like summerfallow will.

A silo is the ideal way to handle corn. The same labor that it takes to stock corn will ensile it, with the power for cutting extra. The silo eliminates all waste as there is no waste in handling green corn. Then the silo may be used for a variety of crops. I have put in green oats with good success. It will also make ensilage of sunflowers, clover and a number of weeds, such as the various varieties of thistles.

Now as to the kind of a silo. Here is where a whole lot of us made a great big mistake. It makes no difference what kind of material you build with, wood, stone, brick, solid cement, cement tile or hollow blocks. They are all good according to the cost; and I would build with the cheapest material whatever it was; but here is the secret. Put it in the ground, and the part above ground go as high as you like, but protect it from frost by threshing a straw pile on it. Any one who has chopped frozen silage will bear me out, and they all freeze if they are not protected. If you are building a barn, by all means have the silo inside, clear inside if possible.

We are rapidly getting to the point in the older sections of the country where a silo is becoming a necessity on every farm. It makes no difference whether you are raising beef cattle or milking; there is no other method of saving feed that will give the same quantity and quality of feed at as low a cost as a silo will.—H. V. Clendening.

Lethbridge, Alta.

I think a silo is the best paying investment on the farm.—A. J. Zettle.

Took Forlorn Chance—Now Glad

Elfros, Sask.

We just purchased our silo this last year. In the expectation of having it we put in some sunflowers. But owing to some of these things that the railroads term "Acts of God" the material for our silo did not arrive until at a time that we thought was altogether too late to make use of it this year. However, after many doubts, we had it erected just about the middle of October, thinking that in any event it was better standing up than lying down.

When it was up we went out to examine what was left of the sunflowers, really with a view of getting them off the land and out of the way. The condition they were in was not promising. All the leaves had been frozen off long since, and the outsides of the stalks was getting pretty

woody. We noticed, however, upon examination that most of the stalks were quite juicy inside, and after taking the matter up with the Department of Field Husbandry of the University of Saskatchewan we decided to try and make use of them, or at least cut them up and put them into the silo and see what happened. In filling we mixed with the sunflowers a few ripe cut oat bundles and wetted the mixture down a bit. It is needless to say that with this as our first experience with silage we had no big hopes of success and were treating it more in the nature of a joke than anything else.

As later we began to try it out with the cattle we were agreeably surprised to find that practically at once they ate it with the greatest relish. Some that we threw off the top as valueless, and right out, was immediately cleaned up by the animals running at large. All the stock are crazy for it, and we certainly can see a decided advantage of this feed, such as it is, over the usual dry hay and other roughage that we have usually fed.

As a concrete example we may say that we started feeding it to a couple of milch cows, which at the time were practically dry, and they immediately came back, so that now we have from these two animals more than twice the milk we had before. As to the question of feeding for beef purposes (which is really our line), we can honestly make this assertion: That with just this feed, which we do not consider to be anywhere near as good as properly handled silage should be, we feel that we can, taking present prices as a basis, make at least \$20 per head from steers fed silage, over and above what the same animals would bring when fed in the ordinary way.

Generally speaking, we are very well satisfied with having gone in for silage feeding. Even the little demonstration that we have as yet had of it has proven to us, to our entire satisfaction, that it is nothing more nor less than a means to guarantee the farmer a certain margin of safe income, over and above the more uncertain income from his grain crops, and as such it is bound to have a good effect all around on the business of farming and make it a surer and a saner proposition.—Halldorson Bros.

Alameda, Sask.

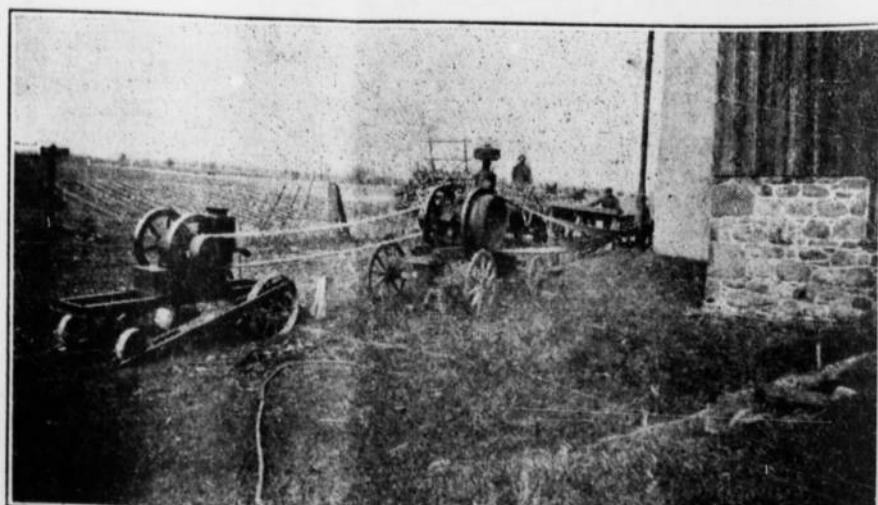
I feed corn ensilage to everything with great success, horses, cattle and hogs. My stuff is all fat. I would not like to be without a silo now.—Andrew Walker.

Fifteen Years a Convert to Corn

Kenton, Man.

Without any qualifications whatever I declare the silo to be a paying proposition. I built mine when prices were at their highest, and if circumstances permit I shall build another one this year.

I have been growing corn for 15 years and am fully convinced of its coming importance as a general crop in Southern Manitoba. However, I have not kept step with the recommendations which our experimenters have given out. They seem to have concentrated their effort entirely on improving the yield of forage, subordinating the characteristic which I consider of supreme importance—early maturity. With me corn is a cleaning crop. I'm done with summerfallow as my



This farmer had no engine powerful enough to drive his silage cutter, so he hitched two small engines together in the manner illustrated.



This fire destroyed a large dairy barn and burned the silo down to the ensilage. Below this point the lumber was so water-soaked that it withstood the flames.

fields won't stay at home if I give them the incessant cultivation which is necessary to keep weeds down. I lost two crops due to soil drifting and I had to sit down and give serious thought to my financial position. As a result my summerfallow is now sown entirely to corn, and I have been getting 21 bushels of wheat per acre, whereas I had only been getting nine bushels after summerfallow. I will sow corn on 70 acres this coming season. I aim at the establishment of a three-year rotation—corn, wheat and oats.

With Gehu corn, even though it is a light yielder, I can get all the forage I can possibly feed when my whole summerfallow is devoted to this purpose. The fact that it is a light yielder means that there is all the more moisture left in the ground for the use of the next wheat crop. Gehu compensates for the scanty yield by maturing early, and as a consequence I am able to put up a quality of silage that rivals anything grown in the corn belt. There is the other advantage, that I am able to grow my own seed as this variety ripens in practically every year.

The quality of my silage enables me to make wider use of it. I feed it safely to horses in winter—one shovelful twice a day to each team, and they thrive on it. I was ashamed of their condition when they came off fall work last year. They are looking fine now, but if I had been obliged to produce that result with grain it would have been costly business. Sows eat it—do well on it. There is nothing like it to keep bred sows in condition. But the main use I make of it is for beef steers. I made \$37.50 profit each on 14 steers fattened during the last six months, mainly on silage.

I have not had a wheat crop that paid expenses since 1915. Livestock husbandry has been the mainstay on my farm, and my livestock operations depend on the corn crop.

I fed corn from the shock for a good many years before erecting a silo, but my boys flatly refused to continue that thankless chore. The silo has lightened our work and enabled us to utilize this valuable crop to better advantage.—Geo. Jones.

Saskatoon, Sask.

Taking into account every expense, including cost and depreciation of silo and machinery, I calculate that my silage plant is an investment that is paying me 35 per cent. dividend annually.—D. J. Binnington.

A Moderate Criticism

Carman, Man.

My experience with the silo has not been extensive. I constructed a silo, however, in 1921, a previous one which I had built having been burned.

From observation and from what experience I have had, I have no hesitancy whatever in saying that the value of ensilage in the raising of beef cattle is unquestionable. The element of expense, however, is a very material one, the cost of silos being such that unless a fair number of cattle are kept the cost would perhaps be too onerous for the ordinary stock raiser, but where a silo is constructed its value I have concluded will pay the outlay if the stock kept is of a reasonable amount.

In our district corn for ensilage can be successfully grown and proves a very valuable crop. Sunflowers also have been grown to a considerable extent and many appear to think their value as ensilage is almost equal to that of corn.

I am convinced that when the construction cost of a silo is brought within the means of the majority of stock raisers that its value will be more appreciated.—H. E. Robison.

Better Than Roots

Moose Jaw, Sask.

Until two years ago, when I bought a silo, I depended upon roots, turnips and mangels for succulent feed in winter. I find that silage provides this requirement with much less labor and expense. The roots take not only more labor to raise, but are much more difficult to handle in feeding during winter weather. The past season I raised an abundance of well-matured corn and sunflowers on land which had raised two crops of grain. Ordinarily this would have been summerfallowed.

Our silo holds approximately 90 tons of green feed. After filling it and allowing it to settle, we refilled it three times and had quite a strip of sunflowers left standing, which the stock have eaten, all except the bare stems.

The land on which this cultivated crop grew is in good shape for wheat or oats the coming season, and in addition will not be so apt to be blown out as has occurred before when left in bare summerfallow. We raise the corn and sunflowers in separate patches and sow both with ordinary grain drill in rows about 36 inches apart and cut with a corn binder. When filling the silo we mix the two together.

We are feeding about 40 head of cattle, including young stock. All are in good shape and relish the silage. Colts like it too. Some steers are being fattened for beef and some of it is being fed to milk cows. We consider the silage very valuable feed for all the above stock.

The fact of sunflowers being suitable for silage, as advocated by our experimental farm experts, induced me to try it, as I was doubtful of corn being a sure crop every year. I have no doubt as to being able to raise sunflowers as they will stand considerable frost. So far I have had very good success in raising a heavy yield per acre.

I consider the silo a practical and profitable investment.—George Wilcox.

Emerson, Man.

We are very well satisfied with our silo. We expect to have sufficient silage to last until the grass is good again, which means a lot to a dairyman, as corn in the stock is not worth much when the weather starts to warm up.—M. E. & L. H. Peto.

Conscientiously Recommends Silo

Wadena, Sask.

The silo is a paying investment and I wish that I had bought mine ten years ago. Ensilage is the cheapest feed that can be raised for stock, as sunflowers yield anything from 15 to 20 tons per acre. In my opinion, ensilage can be raised and put in the silo at about one-half the price of prairie or slough hay. Another point to be remembered is that ensilage is a succulent feed. I feed silage twice a day, morning and evening, feeding roughage at noon.

My cows were about dry when I began feeding ensilage, and it was only a few days after we began feeding until the cows gave three times as much milk as before. I might also state that all the stock on my farm are crazy for silage, they watch the silo when we throw out the feed for the milk cows; even the pigs want silage.

It may be of interest to Guide readers to know something about the freezing. My silo has frozen nearly a foot deep, but this does not harm the ensilage, and if the frozen silage is chopped off and thrown in the centre of the silo it will thaw. The most important thing to remember is that all the doors are kept tightly closed and prevent the entrance of air from above.

In conclusion, I can conscientiously recommend a silo to every farmer who has stock.—W. G. Reynolds.

Economy and Efficiency in Feeding

A silo ensures a supply of good feed that can be fed out as needed, winter or summer. Silage will keep for several years and is a veritable forage bank for the farmer.

To fill a silo properly requires a machine adapted to all the conditions met in operation and transportation.

With a Case Silo Filler you can cut silage fine or coarse and be sure that the cut is uniform. The cutting is done by straight knives on an unbreakable boiler plate fly-wheel. Case knives are quickly adjusted and give powerful action in cutting. Mounting the knives and fanwings on the fly-wheel is especially desirable for cutting sunflower stalks and mixed fodder.

Case Silo Fillers are heavily constructed throughout, stand up for years of service and have unusually large capacity.

No. 10 cuts 4 to 7 tons per hour and requires 6 to 8 h.p.
No. 12 cuts 8 to 15 tons per hour and requires 12 to 18 h.p.
No. 16 cuts 15 to 25 tons per hour and requires 20 to 30 h.p.
No. 20 cuts 20 to 30 tons per hour and requires 25 to 40 h.p.

For complete information about Case Silo Fillers, Case Kerosene Tractors, Threshers, Steam Engines, Baling Presses, Road Machinery, Grand Detour Plows or Disc Harrows call on your nearest Case dealer, or address a post card to the nearest Case branch.

J. I. Case Threshing Machine Company
Dept. Q47 RACINE WIS.

FACTORY BRANCHES
Alberta: Calgary, Edmonton. Manitoba: Winnipeg.
Saskatchewan: Regina, Saskatoon.
Ontario: Toronto.

CASE
SILO FILLERS



EMPLOYMENT SERVICE OF CANADA

Government of Alberta

To the Farmers of Alberta--

The above Service respectfully requests that you make your requirements known, for Spring and Summer workers, as soon as possible.

The Service has offices at Calgary, Edmonton, Lethbridge, Medicine Hat and Drumheller.

SERVICE FREE

J. W. MITCHELL, Director.

Economy



THE IDEAL GREEN FEED SILO is famous for its *economy*. Silo economy means lowest cost per pound of first-class silage per year. The IDEAL is so well built, and the materials so properly selected, that it outlasts any other stave silo by many years.

The IDEAL is an *economical* silo also because its contents are always in the best possible condition. It is so excellently constructed and built that it stays air-tight for years.

Freedom from repairs is another reason for IDEAL *economy*.

Write today to our nearest sales headquarters for our silo catalogue, which contains much valuable information about silos and silage.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA

Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, De Laval Milkers. Catalogues of any of our lines mailed upon request.

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P. Burns & Company Limited

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Packers of "SHAMROCK" and "DOMINION" Brand Food Products.

"SHAMROCK BRAND" is without a peer. Take it to your home and try it out.

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"THE EMPIRE'S STANDARD"

Plants at

CALGARY EDMONTON VANCOUVER REGINA PRINCE ALBERT

Why you should ship CREAM to us

We make immediate cash settlements, make careful tests and grades, and pay highest market prices.

We try to give "REAL SERVICE" to the Shipper.

The Saskatchewan Creamery Company

OF MOOSE JAW, LIMITED

Head Office: Moose Jaw. Branch Butter Factories: Wolseley, Carlyle, Carnduff, Weyburn, Swift Current, Maple Creek, Assiniboia, Empress and Shaunavon.

The Farmers' bargain counter—Guide Classified ads.

Silage Brought Cows Back

Saskatoon, Sask.

I have been feeding sunflower silage since early last fall to both dairy and beef cattle with very satisfactory results. A number of our cows that have been getting a liberal allowance have not only given a larger quantity of milk, but have gained considerably in flesh. They appear to relish the silage and are in splendid physical condition.

Last spring we sowed five acres of sunflowers on high land that had grown oats and flax the two years previous. When harvested they filled a 12 x 32 silo within a few feet of the top. We figured our average yield at about 15 tons to the acre, but lost a great deal of this in juice getting away on account of not having a cement floor.

The seed was sown with a double-disc seed drill on well-worked spring plowing, in rows 24 inches apart, at the rate of

12 pounds to the acre. Owing to some being destroyed by gophers, cutworms and crows it was none too thick at that rate of seeding, but the rows should have been at least 30 inches apart. I am very well satisfied with my silo, also with sunflower ensilage as stock food.

It is not to be understood that rapid gains in weight will be made with beef cattle, nor that dairy cattle will continue giving a heavy flow of milk, without feeding some grain ration in conjunction with the silage.—H. B. Card.

Stirling, Alta.

My own experience is that with cows it increases milk production one-third over the best results obtained from good second-crop alfalfa. When it is remembered that the average price of alfalfa is \$15 per ton compared to \$2.00 per ton for ensilage, the brief for the silo is rather convincing.—W. H. Spackman.

Cost of Producing Silage

Weight of Sunflower Crop materially Increases Cost of Production as compared with Corn—Cost about same per ton as Roots—Has Twice Feeding Value—By Prof. A. H. Benton

THE cost of producing silage in Western Canada, according to the most accurate data available, ranges from \$4.00 to \$5.00 per ton. This charge would include interest and depreciation on silo. In 1921 the yields of corn and sunflowers used for silage at the Manitoba Agricultural College were quite heavy. The sunflowers averaged 30 tons per acre and the corn 18 tons. The records kept indicate a cost of \$9.54 per acre for the seeding and cultivation of the land in case of corn, and \$18.06 in case of sunflowers. Harvesting and silo filling for corn amounted to \$37.26 per acre, and for sunflowers \$62.10. It will be noted that in each case harvesting and filling the silo constituted the large item of cost. For both corn and sunflowers this amounts to \$2.07 per ton. This data, included with estimates covering other items of cost for Red River Valley conditions, is shown in the following table:

Corn Silage (18 tons per acre)	
Land rent	\$ 4.50
Use of farm machinery	1.50
Seed	.65
Fall plowing	2.00
Seeding and cultivation	9.54
Harvesting and filling silo	37.26
Twine	.75
Total	\$56.20
Cost per ton	\$ 3.13
Interest and depreciation on silo	.60
Total cost per ton	\$ 3.73

Sunflower Silage (30 tons per acre)	
Land rent	\$ 4.50
Use of farm machinery	1.50
Seed	.65
Fall plowing	2.00
Seeding and cultivation	18.06
Harvesting and filling silo	62.10
Twine	1.20
Total	\$89.87
Cost per ton	\$ 3.00
Interest and depreciation on silo	.60
Total cost per ton	\$ 3.60

In the above calculations horse labor was figured at 20 cents per hour and man labor at 40 cents. The silo cost was calculated on the basis of a 14 x 28 stave

silo with roof and good foundation. Under present prices this will cost approximately \$600, and figuring interest at six per cent. on the average value and depreciation at five per cent., a cost of 60 cents per ton is secured. The cost of silage per ton for Red River Valley conditions, based on the figures of the Manitoba Agricultural College, is very favorable. This is partially due to the heavy yields secured in 1921; however, even with a yield of ten tons of corn and 20 tons of sunflowers, the total cost would only be \$3.96 for corn and \$3.46 for sunflowers. These figures are on the assumption that the cost of harvesting and filling the silo would be no higher per ton with the lower yields.

Brandon Records

The figures already given are interesting when compared with the cost of \$3.87 per ton for corn silage at the Dominion Experimental Farm at Brandon in 1921. This figure does not include any silo charge. If a silo charge of 60 cents per ton were added, the cost would be \$4.47.

For a number of years the Manitoba Agricultural College has co-operated with groups of farmers in order to secure the cost of producing various kinds of farm crops. Data from Halstad, Minn., which is in the Red River Valley, approximately 200 miles south of the boundary, shows the cost of producing corn silage for the five years ending 1918 to be \$4.14 per ton. This cost does not include any charge for interest or depreciation on the silo. The higher cost at Halstad is partly accounted for at least by the fact that the yield was only five tons per acre.

If it cost \$3.73 per ton for corn silage in store and \$3.60 for sunflowers, what is the cost of raising roots under the same conditions? The following figures from the Manitoba Agricultural College farm afford a good comparison, as the charges for land, rent, use of machinery and preparation of the seed-bed are the same as in the case of the silage crops, and the records were kept in the same season, 1921, an extraordinarily good year for



Where corn can be grown it stands without a peer as a silage crop. This is from a photo of the crop which yielded 18 tons and which supplied the figures used above by Prof. Benton.

Here is the Silo You Need

The Value is Unequalled



It Doubles the Profits of Livestock

The "CHIEFTAIN" Tecktonius Silo—specially built for the Western farm.

Ask us the names of actual users of the

"CHIEFTAIN"

Tecktonius Silo

—in your district, or right here in Western Canada.

Call at the nearest "Chieftain" yard, or write direct to 720 Union Bank Building.

North American Lumber and Supply Co. Limited
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WINNIPEG

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SILO

Dealers for Northern Saskatchewan

WRITE FOR LITERATURE

Prince Albert, Sask.

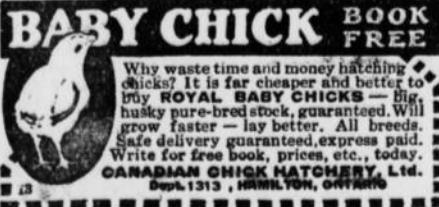
SILO SERVICE

Prosperity has followed in the wake of every silo erected. Our local yard managers are in a position to give you accurate knowledge as to the size and the cost of the silo which is best fitted to your requirements. If unable to consult the yard manager, just drop a card to head office, simply stating how many head of stock you are feeding. We will be pleased to mail you scientific information—free.



Head Office:

Moose Jaw - Sask.



both classes of crops on account of the lateness of first killing autumn frost:

Turnips (26½ tons per acre)	
Land rent	\$ 4.50
Use of farm machinery	1.50
Seed	1.12
Fall plowing	2.00
Seeding and cultivating	7.90
Hoeing and thinning	28.60
Harvesting	41.80
Hauling tops	9.90
Total	\$97.32
Cost per ton	\$ 3.66

Over a period of years the average yield has been 19 tons per acre, and the average cost of production has fluctuated around \$4.00 to \$4.25 per ton. However, for purposes of comparison with the figures given for silage it is necessary to

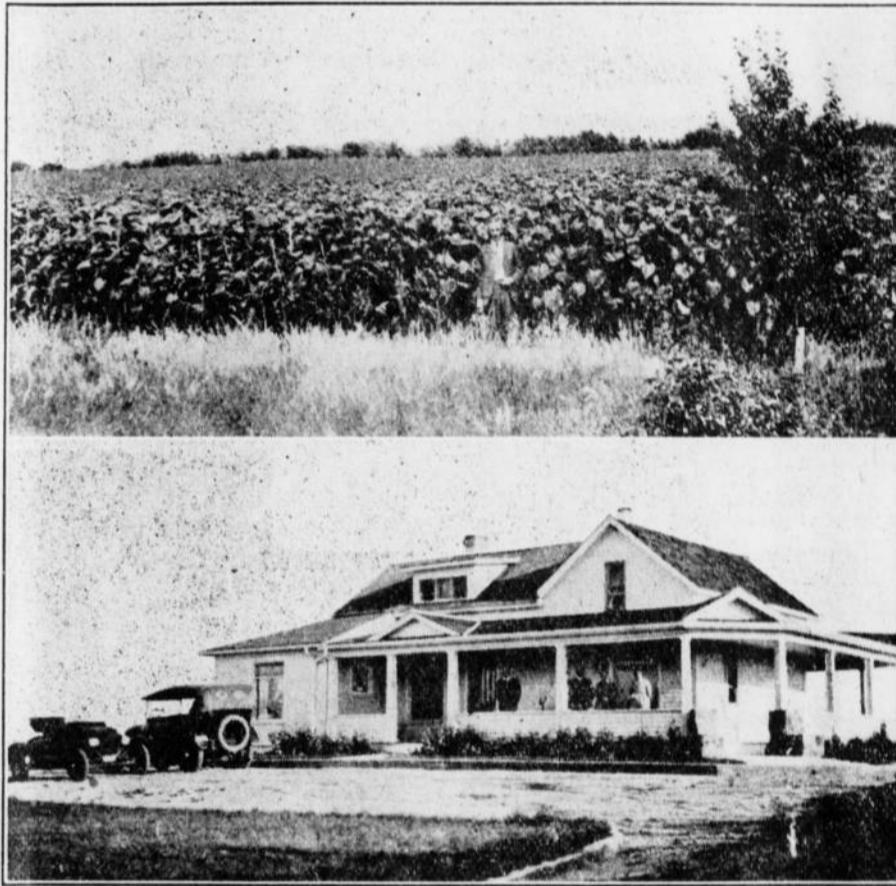
keep to the records of the past favorable season.

It will be seen that the cost per ton of swedes is midway between the cost of a similar weight of corn and sunflower silage. The difference is so small that practically the cost of production may be taken as equal. How do they compare on a basis of food value? The following figures from Henry's standard work on Feeds and Feeding is instructive:

Digestible Nutrients Per 100 Lbs.			
Crude Protein	Carbo Hydrates	Fat	Total
Corn silage . . . 1.1 lbs.	15.0 lbs.	.7 lbs.	17.7
Swede turnips . . . 1.0 lbs.	7.7 lbs.	.3 lbs.	9.4

On a basis of the cost involved in producing these crops the return from silage is nearly double that from roots.

IS THERE ANY CONNECTION?



Scenes from Vimy Ridge Ranch, Semans, Sask., the home of W. G. Booth.

When G. W. Booth came West in 1902, his assets were \$500 cash and a family full of hard work and faith in the country. There are men who have plunged and made more money, but his aim has been to educate his family and build a comfortable home. And he has succeeded. At least we'll say so.

The original 160 acres has expanded to 1,440. The log house has gone through several metamorphoses. You'd hardly recognize it now. Inside it, the homemaker's reward has been electric lights, phone, hot-water heating system, and all the modern electric devices for driving churn, washing machine and other household machinery.

Everyone knows of families of boys who through a period of virtual child-slavery, which denied them schooling, have contributed to a result like that depicted above. But Mr. Booth had a different idea. Two of his sons have agricultural college degrees. The third is sleeping with that gallant host who answered the last summons on Vimy's tortured slopes, in memory whereof the homestead has been named. The only daughter is now in high school.

But speaking of a happy combination of brains and physical effort, notice that the Booth's are believers in silage crops. The upper illustration shows five acres of corn and sunflowers which form part of the plan for sure financial returns.

Ten Articles of Faith

Upon which rests the Silo Owner's Belief

1. The silo provides a means of saving a larger percentage of the nutrients in the corn crop, especially in the case of drought, early frost, or failure to mature.
2. The silo conserves the nutrients of the entire corn, or other ensiled plant, in a palatable form.
3. Silage is succulent and provides conditions in winter similar to summer pasture.
4. The silo ensures a saving of time and labor in winter feeding. Silo owners do not have to face blizzards to haul fodder in from the fields.
5. More feed can be stored in the form of silage than in the form of fodder or hay.
6. Silage furnishes a uniform quality of feed and puts bloom and good coats on livestock in winter.
7. Acre for acre, silage is the best feed known.
8. Silage can be used profitably as a supplement to pastures in summer.
9. Silage properly made is a good feed for cattle, horses and sheep. It increases the flow of milk in winter when prices are highest, and thereby lowers the cost of production and increases the profits.
10. Silage reduces the cost of beef production, is economical for maintaining breeding animals, and keeps young stock thrifty and growing all winter.

SILAGE CROPS

Saving the crop is important, but only by using good seed will you have the maximum quantity to save.

Good Seed is imperative—using inferior seed is a poor business policy.

McKENZIE SEED

SUNFLOWER

(Bags at 20c)	IN BIG DEMAND—STOCK CHOICE	Per 100 lbs.
Giant Russian, light stripe	Brandon	Calgary
Manchurian, dark stripe	\$10.00	\$11.00
	14.00	14.00

SEED CORN

Seed Corn is very choice stock. We can supply it at from \$1.35 to \$3.05 per bus., depending on where the seed was grown.

See Pages 54 and 55 of Catalog.

SWEET CLOVER

Manitoba and Saskatchewan grown and No. 1 Gov't Grade. Our stock of Arctic is grown from seed procured direct from Prof. Bracken, at University of Saskatchewan.

See Pages 63 and 64 of Catalog.

WRITE FOR CATALOG

Every planter should have a copy of this book—authentic and complete. A post card will bring it.

Everything in Seeds listed and described.

A. E. McKenzie Co. Ltd.
BRANDON, MAN. CALGARY, ALTA.

HYLO SILO

Sweet Fresh Ensilage down to the last forkful

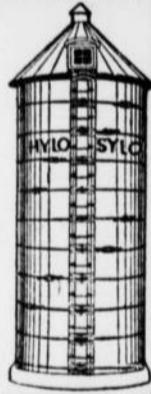
THE Hylo-Silo is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.

Write for prices and catalogue.

AGENTS WANTED

GILSON MFG. CO. LTD.

774 Chambers St., Winnipeg



BUILD YOUR OWN SILO

You can save much time, labor and money by mixing your own concrete when building barn-floors, foundations, silos, etc., with the

BRANTFORD CONCRETE MIXER FOR SMALL JOBS

This is the sturdy mixer that anyone can operate. It loads on one side and dumps on the other, directly into wheelbarrow or forms. Built for hand or power, on skids or mounted on trucks, with or without engine. The best all-round small job mixer on the market. We also build larger size mixers for bigger jobs.

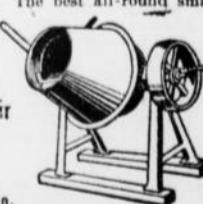
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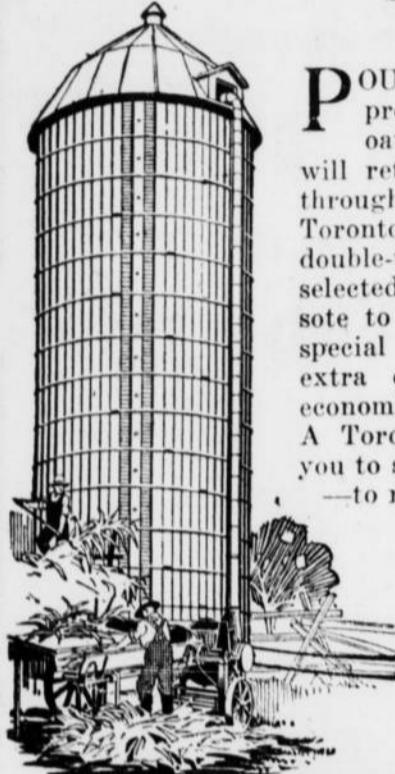


THE TIRE SENSATION OF 1921
WILL BE YOUR CHOICE FOR 1922

A Profitable Combination

SUNFLOWER SILAGE

TORONTO SILO



POUND for pound, sunflower silage is proving superior to corn, or peas and oats. Stored in a Toronto Silo, it will retain its efficient feeding qualities throughout the season.

Toronto Silos are strongly built from double-tongued and grooved staves of selected spruce—impregnated with creosote to give adequate protection. Their special Hip-Roof construction gives them extra capacity—makes them the most economical silos you can buy.

A Toronto Ensilage Cutter will enable you to store your ensilage when you want—to refill after shrinkage.

Our booklets on Sunflower Ensilage, Toronto Silos and Ensilage Cutters contain information of value to you. Write for them, they are free.

Ontario Wind Engine and Pump Co.

(Western Branch) Ltd.

Winnipeg Regina Calgary
Eastern Offices: Toronto, Montreal.

ONTARIO WIND ENGINE & PUMP CO. LIMITED

TORONTO

**Which Is Most Important To You
What Goes into a Can of Paint
or What Comes Out of It?**



A long time ago, Lowe Brothers found out that six different ingredients had to be used in making High Standard Paint, if their customers were to get the satisfaction and lastingness out of every can that they had a right to expect.

They found out, also, that a different mixing and

grinding process had to be employed.

You're not particularly interested in the manufacturing details, but you do want satisfaction and lastingness in paint.

That is what Lowe Brothers put into every can of High Standard. Send ten cents for "The Happy Happenings"—a book that contains much dearly-bought experience in painting.

Lowe Brothers, Limited

PAINT MAKERS — VARNISH MAKERS
Factory Toronto. Branches: Winnipeg, Calgary, Halifax.



Lowe Brothers
Paints - Varnishes

WHEN WRITING TO ADVERTISERS PLEASE MENTION THE GUIDE

Silo History

Practice of Storing Green Feed handed down from antiquity—Brought to United States from France—Early Silos all Below Ground—P. M. Abel

SK any of your returned soldier friends what a staff car is. If he happens to be one of those fortunate individuals who sported a sunset browband he will define it as one of the rare luxuries which blossomed during the war, but is now unhappily an extinct species. If he was one of the great majority who had a private license number up in the millions stowed under his shirt, and divided his nights between damp estaminets and damper blankets he will have a different definition. If you happen to catch him in a particularly pleasant mood, he will say a staff car is a screeching, irresponsible monster, whose devouring wheels fling mud at all and sundry, whose glaring eyes clear terrified pedestrians off the road for a mile ahead, and whose trail is marked by sulphurous and nauseating fumes. If you catch your informant in a particularly testy humor, he might be able to do his subject justice.

At all events I had my first practical experience with a French silo through the medium of a staff car. I was travelling on horseback along a narrow road when one of these demoniacal things descended upon me from nowhere, hissed, roared, splashed, and polluted the atmosphere and was gone. And so was I. My horse made a leap to escape what looked like certain death, and landed in what I took to be a bog-hole, or a choice piece of imported muskeg. With the help of some Alberta comrades the horse was eventually extricated by a process which threatened to leave him tail-less. As for me, I had had my first taste of silage.

Among Sugar-Beet Growers

It is a common practice in the fall of the year on most French farms, in Flanders and Picardy at least, where sugar beets are grown extensively, to dig trenches about four feet wide and the same depth, and whatever length happens to be convenient. The sides of the pit are kept square and trim. Into these pits are put alternate layers, each about one inch deep, of beet tops gathered from the fields, and beet pulp hauled from sugar factories. When the surface of the ground is reached the layers are piled up to make a conical-shaped roof so that the part above ground looks like a hay stack from the eaves up. This is then covered with straw and about six inches of soil, or enough to prevent freezing to the contents, is thrown on top of the straw.

The peasants take great pains with these pits. In clay soil the dirt that is thrown on the straw is put on with the same care that a carpenter would exercise in laying shingles. After one or two of the rain storms which are frequent at that season of the year the whole pit is as nearly airtight as it can possibly be made with a dirt covering. After a period necessary for decomposition, these pits are open and fed from.

First American Silos

In 1875, Dr. Manly Miles, an American who had learned about silos in France, built the first silo to be erected on this continent. Francis Morris built one in the state of Maryland in 1876, and the first one

to be built in the West is said to be that of Levi P. Gilbert, at Fort Atkinson, Wis. These early silos seem to have all conformed pretty closely to the type now in use in France.

Quite a little prejudice existed against these early silos. Old residents now living recall that people shook their heads and declared that stock obliged to eat this decayed forage would suffer all manner of injury. It was commonly stated that the teeth of cows which ate silage would drop out, and that their stomachs would become rotted.

A lot of this early silage was none too good. It was not fully realized that an essential in the production of good corn silage was to have the crop well matured. A veteran Wisconsin dairyman, speaking of the silage stored by the Mr. Gilbert above mentioned in 1877, says that it was quite sour and smelled strongly of alcohol. The process of silage making is now so well understood that it would be harder for a farmer to explain the odor of alcohol now emanating from a silo.

Erect Silos Introduced

About 1880 the idea was conceived of building silos above ground. The first erect silos were made entirely of wood and resembled very much the kind of building we use today for a granary. They were mostly about 16 feet square with a peak roof. It is related that in some of these buildings in order to get the necessary pressure on the stored fodder, a layer of stones about a foot deep was thrown in on top.

In 1882, a stone silo was built by Prof. Henry, whose name has since become famous as the highest authority in matters of livestock feeding. Writing in 1886, Prof. Henry said, "To store corn in a well built silo is seemingly the best way there is of getting all there is in corn at the time of ripening." The only amendment that a quarter of a century of experience would make would be to omit the word "seemingly." By 1886, there were over 100 silos in Wisconsin, which was, and has ever since been the leading state with respect to silo development.

A record of silo development would not be complete without mention of the name of John Gould, of Ohio, who was known in his day as the silo missionary. His work was effective, and gave great impetus to silo expansion, but it was not till the late nineties that there was any general demand for them. Since that time they have grown in popularity till it is said in Wisconsin at least there is hardly a man with a dozen cows who does not own one silo at least.

Silo Dates Back to Ancients

It may not be out of place to quote here what Prof. F. W. Woll has to say about the origin and early use of silage. In his book on silage, which was prepared some 25 years ago, he says:

"The history of the silo dates back to antiquity. Ancient writers speak of the practice of burying grain in underground pits to save it for future use or to hide it from their enemies, and the evidence at hand goes to show that semi-barbaric peoples in the different parts of the



The demonstration of the suitability of sunflowers for silage has moved the northern limit of silos well up into the western provinces.

world have known and practiced this method. Green forage was preserved in the same way in the early history of the races of Northern Europe, notably in Sweden and the Baltic provinces, where the uncertainty of the weather and the low summer temperature rendered difficult the proper curing of the hay. It was not, however, until toward the middle of the present century that the practice of preserving green fodder by means of pits in the ground became more known. The method was especially practiced in Central Europe, where large quantities of green leaves and tops were available every fall in the sugar beet districts; also green forage, such as Indian corn fodder, green clover, grass, etc., was treated by this method; the fodder being placed in pits ten to twelve feet square, or larger, and as many feet deep; these were often lined with wood and puddled below and at the sides with clay. The fodder was spread evenly in the pits, and well trampled down; when the pit was full, the whole was covered with beards and a layer of earth one to two feet thick; such pits would hold nearly ten tons when full. It is stated that the silage thus obtained 'remained green and was well liked, even by sheep.' This practice slowly spread; in the sixties, over 2,000 tons of Indian corn was thus made into silage annually in a single small German province where dairying is an important industry.

"One of the earliest advocates of the practice was M. Reihlen, of Stuttgart, Germany. His communications on the subject gave an impetus to a large amount of experimentation and study along this line, both among German and French farmers. The French farmer, Auguste Goffart, whose name by most writers has been connected with the origin of silage, in 1877, published his book, *Manual of the Culture and Siloing of Maize and Other Green Crops*, which book is the first monograph on the subject ever published, and embodies the experience and results of twenty-five years' study of the problem by the author. While Goffart has no claim to priority in inventing the method of siloing green fodders, he perfected and applied it on a large scale, and in publishing the results of his experience brought the subject to the general attention of farmers; he may, therefore, justly be called the 'Father of Modern Silage.'

Silage Crops

Continued from Page 7

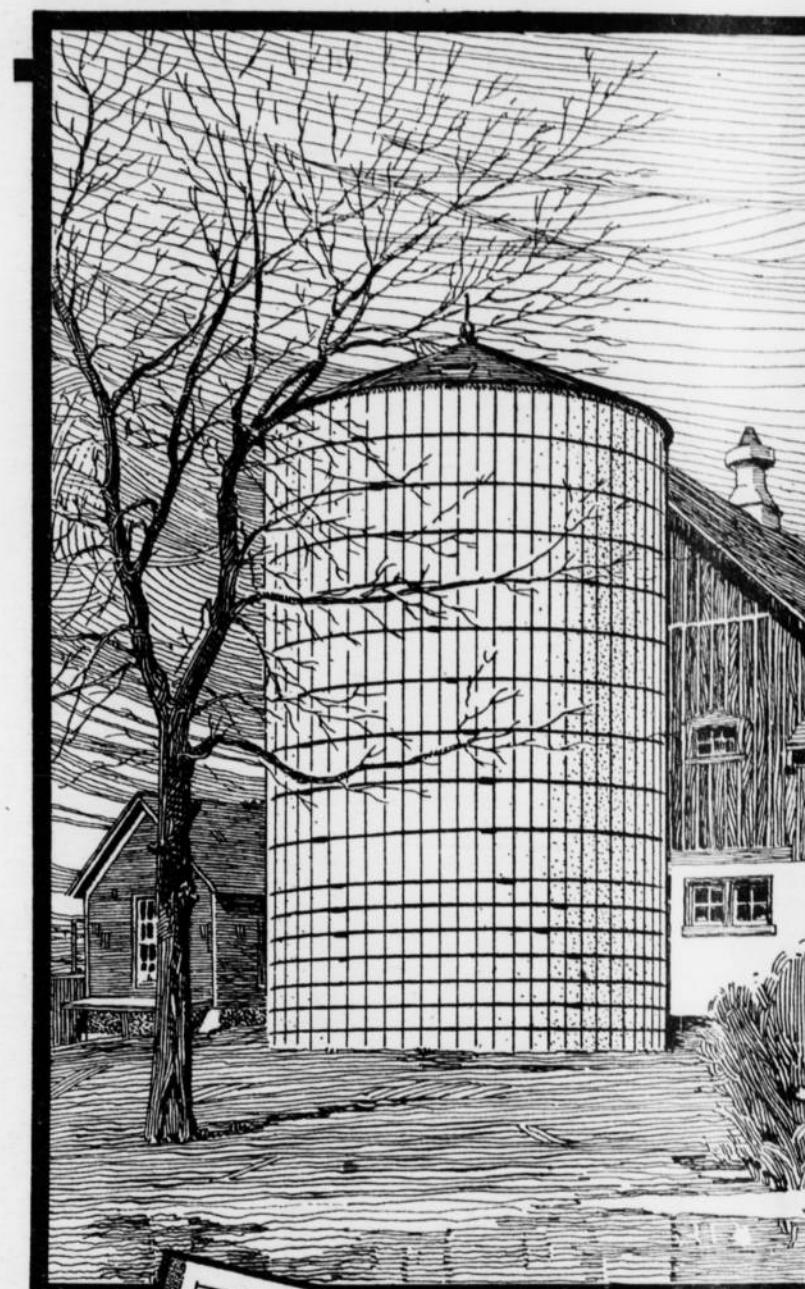
not susceptible to light frosts and may be allowed longer to mature. On the other hand they are very subject to rust and many of the leaves blacken and fall off if they are left standing after the rust gets bad. The best time for cutting sunflowers has not been worked out by experiments as yet. Corn is best in the firm dough stage.

U.S. Grain Growers

Incorporation of the U.S. Grain Growers Sales Company, a grain marketing subsidiary of the U.S. Grain Growers, Inc., which will immediately make arrangements to open its doors for business in the Chicago, Kansas City, Omaha, Indianapolis and Minneapolis markets, was announced by the officers of the U.S. Grain Growers, Inc., at Chicago, on March 5. The company expects to be in a position to handle grain at a very early date, the officials said. The volume of business already contracted with the U.S. Grain Growers by its membership will make the subsidiary organization the largest grain selling firm in the world.

At the date of this announcement it was reported that the U.S. Grain Growers had a membership of over 50,000 farmers in the middle western states, who have contracted to market the whole of their grain aggregating approximately 110,000,000 bushels a year, through the organization. Organization work is being continued, and the membership is increasing at the rate of nearly 2,000 a week.

The U.S. Grain Growers, Inc., has not yet commenced the actual marketing of grain, but the above announcement indicates that the officials expect to have the organization in full working order for the 1922 crop.



The Importance of the Silo

SILAGE is the feed that pays. During the Canadian winter stock must be fed some green, nutritious feed—and a good silo acts as a big jar for holding the silage which forms the substitute for green fields and pastures.

There is no longer any doubt about the economy and efficiency of silage. Livestock of all kinds thrive on it. When the right crops are used, and it is properly made and stowed, it is as dependable as the calendar. But the whole business must be managed right. The right crops must be raised and the right kind of silo must be constructed.

The Importance of Concrete

Just as it is an uphill proposition to farm without a silo, so you are placing a handicap on your efforts if you try to get along with a silo built of any other material than Concrete.

Year in and year out you can store silage more cheaply in a Concrete Silo—because there will be no upkeep or repairs. Cheap silage means cheap milk. Silage stored in a Concrete Silo always comes out in perfect condition. The illustration on the left shows a Concrete Stave Silo.

The Importance of this Free Book

No farmer should decide on the type of silo he will build—or attempt the building of one—until he has read our book, "What the Farmer Can Do With Concrete."

You should have this book, not only to learn why and how to build a silo of Concrete—but also to understand how to construct many other farm buildings and improvements that farmers now build of Concrete as a matter of efficiency and economy.

This book may mean hundreds of dollars in actual profit to you. By following its plain directions you can, in your spare time, build almost everything your farm should possess in the way of concrete improvements. It covers all the uses of Concrete on the farm from a fence-post to a silo.

Ask for Canada Portland Cement, the uniformly reliable brand. It can be secured from more than 2,000 dealers throughout Canada. If your dealer cannot supply you, write our nearest Sales Office.

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499 HERALD BUILDING - MONTREAL

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CONCRETE
FOR PERFORMANCE**

Real Tested Seeds



We supply the World's Finest strains of Vegetable and Flower Seeds, all Tested for Purity, Type, Quality and Productiveness on our own Trial Grounds.

Reliable Field Stocks

ARCTIC SWEET CLOVER

The New Biennial White Blossom Strain introduced by Prof. Bracken at the University of Saskatchewan. We purchased our supply from Prof. Bracken, the shipment coming direct from the Bracken farm, west of Saskatoon. Fine Quality, Scarified and Eligible for Registration. Price, 100 lbs., \$17.00; 25 lbs., \$4.50. Cotton bags, 40c each.

SWEET CLOVER—Standard Biennial White Blossom

Our stock was produced on the prairies of Western Canada. 100 lbs., \$13.00; 25 lbs., \$3.50. Cotton bags, 40c each.

If wanted, we can supply GENUINE HUBAM—the New Annual White Blossom Sweet Clover—at \$1.25 per lb., postpaid; 10 lbs. at \$1.00 per lb., by express at customer's expense.

SUNFLOWER—Russian Giant

For ensilage. 100 lbs., \$10.00; 25 lbs., \$2.75. Bags, 15c.

BROME GRASS

"Lion" Brand, 100 lbs., \$12.00; 20 lbs., \$2.60. "Beaver" Brand, 100 lbs., \$11.00; 20 lbs., \$2.40. Bags, 35c.

WESTERN RYE GRASS

"Lion" Brand, 100 lbs., \$12.00; 20 lbs., \$2.60. "Beaver" Brand, 100 lbs., \$11.00; 20 lbs., \$2.40. Bags, 35c.

Pleased to receive your name for copy of our Catalogue.

*Steele, Briggs Seed Co.
Limited*
WINNIPEG.

The Wisest Farmers Are Those That Know The Law

These Questions Are Often Asked:

- How is an Affidavit made?
- How is an Assignment made?
- How is a Company formed?
- How is a Lien Note filed?
- How to make your Last Will?
- What is the responsibility of an Agent?
- What is the law about a Chattel Mortgage?
- What is the law about a Bill of Sale?
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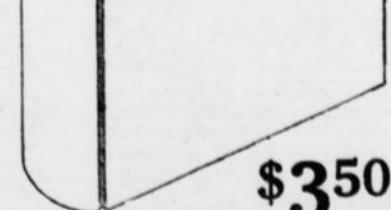
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Silo Construction

Some Points for the Consideration of Prospective Silo Owners

ALMOST every kind of building material has been utilized in silo construction. The walls have been successfully built of stone, brick, concrete, tile, plaster, sheet iron and wood. Any material which is sufficiently strong and which will make an air-tight wall will make a satisfactory silo. The life of the silo depends upon the durability of the material used for the walls, and upon the solidity of the foundation. The importance of this latter factor cannot be too heavily stressed. Most of the silos which fail, do so because of inadequate foundations. The foundation should be level so that the silo will stand on a vertical position. Wood silos should stand on a concrete base, no less than nine inches thick, four feet in the ground, and with a footing 18 inches across the face.

How Long Will Silos Last

With respect to durability, the concrete silo is without an equal. There is considerable variation as to length of life of wooden silos. A properly built wood silo will last from 10 to 35 years. California redwood and cypress are the most durable. The U.S. Bureau of Forestry is responsible for the statement that the average life of a redwood and cypress silo is 14 years. Next in order of merit is fir, which is said to have an average life of 10 years.

Contrary to general opinion, silage does not hurt wood as it is only one-tenth as strong as cider vinegar. Experience with whiskey and sauerkraut barrels do not indicate damage from liquids containing acids or alcohols. The chief cause for the relative shortness of life of silo wood is the alternate drying and thawing to which it is subjected.

Air is fatal to the quality in silage. Everywhere that air gains admission, there will be spoiled silage found. Mouldy silage is dangerous feed. The exclusion of air is one of the principal reasons why a silo should be tramped during the process of filling. The walls of a silo should be smooth so that settling will be even. Corners or structures that cause uneven settling are responsible for the creation of air and gas pockets, resulting in the inevitable moldy silage.

Need for Strong Hoops

The pressure on a silo wall is tremendous, hence they should be well supported. According to Prof. King the outward pressure of silage 15 feet below the top is 165 pounds per square foot; 30 feet from the top the pressure is 330 pounds per square foot.

Wind pressure against silos is considerable, and on account of their peculiar construction they are not adapted to resist this kind of strain. The silo which is expected to weather Canadian winds must be securely anchored in all directions.

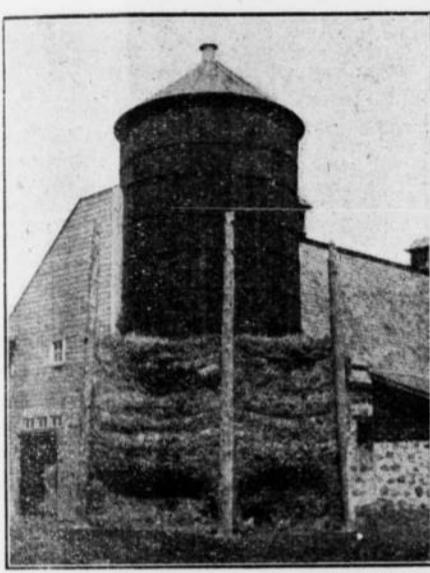
Estimating Dimensions

One secret of success in the manufacture of silage is to have it well packed. Indeed this is one of the chief points of advantage of the creel silo over the trench silo. Where the height of old makes of stave silos used to be one and a half times the width, they are now made two, two and a half and even three times the width. As the roof and foundations cost the same for a given diameter of silo it is really economy to have good depth. On estimating the width of a silo, the calculation is usually made on the basis that a layer of about two inches in depth

should be fed off every day. Each mature cattle beast will eat about one cubic foot or 35 pounds daily. Thus 20 cattle would just about consume a two-inch layer in a 12-foot silo in one day, and it would take just a little over 30 feet to last for six months' feeding. Silos over 16 feet wide are not recommended. As two 11-foot silos hold about the same quantity as one 16-foot silo, it is better to have two small ones, rather than one over the maximum safe diameter. The capacity tables on this page will be of some assistance in making calculations.

Frost Protection

Silos have been built every imaginable shape, but nowadays 99 out of every 100 are round. The round silo can resist much greater internal pressure, allows silage to settle more evenly and presents a smaller surface for freezing which is an important item in this cold climate. Indeed, Western Canadian silos give better satisfaction if they are protected against frost. One practical scheme is illustrated on this page. Long poles are driven into the ground about 30 inches out from the silo wall. They are wound round with plain or woven fencing wire, and straw



Although this anti-freeze straw jacket has become dilapidated, it illustrates why this silo was able to come through a Canadian winter with the minimum of freezing.

tramped in between. It is not necessary to jacket a silo in this way clear to the top, as the natural heat of the product will resist early winter temperatures and protection will only be required after the inside level has been reduced by feeding. Some western silo owners do not go to this trouble, and get through the winter without serious loss from freezing.

Relation of size of silo to length of feeding period and size of herd:

Feed for 180 days
Estimate of Silage
Number of Cows Consumed in Herd

Number of Cows Consumed in Herd	Estimate of Silage	Size of Silo
10	36	10 feet
12	43	10 feet
15	54	11 feet
20	72	12 feet
25	90	13 feet
30	108	14 feet
35	126	15 feet
40	144	16 feet
45	162	16 feet
50	180	17 feet

Capacity of silos of varying sizes:

Inside diameter of silo in feet

Depth of Silage Feet	10 Tons	12 Tons	14 Tons	16 Tons	18 Tons
25	36	52	68	96	122
28	40	61	81	108	137
30	44	68	90	115	150
32	50	72	95	126	162
34	53	77	108	142	171
36	57	82	114	158	194

Popularity of Silos

Although the figures quoted below are over a year old they give a fair idea of the popularity of silos in the central American states.

State Farms Silos

Missouri	277,244	3,880
Ohio	272,045	15,000
Illinois	251,872	24,500
Indiana	215,485	14,500
Michigan	206,960	12,000
Oklahoma	190,192	2,000
Kansas	177,841	9,695
Wisconsin	177,127	53,000
Minnesota	156,137	3,100
Nebraska	129,673	4,500
South Dakota	77,644	2,000
North Dakota	74,360	1,550

(Figures are approximate.)

Feeding From Pit Silos

Extracting the Product from a Pit Silo may become a Laborious Job if a little ingenuity is not exercised

UNDoubtedly the greatest drawback to the pit silo is the difficulty of getting out the feed. While an erect silo may be a little harder to fill, at least this may be said: Once filled with power machinery at harvest time, the heavy work is over for the year. The following suggestions for rigging up hoists may suggest devices best suited to fill individual requirements.

Figure 1 shows a home-made hoisting device for semi-pit silos, which can be adapted to pit silos. It consists of a three-inch pipe carrying a wooden wheel at A and two wooden drums at B and C. At D is shown the counterweight, which

practical hand hoist. This hoist can be built as shown for pit silos, or it can be used in semi-pit silos by placing the cross-beam in place and setting the inclined chute into the door after the silage has been fed down sufficiently to need being hoisted.

The method of operating the hoist is to fill the box, which should be made of thin wood or galvanized iron, pull down on the rope, which will hoist the box with silage until the rod attached to the front end of the box catches under the hooks at the side of the chute, then by continuing the pull on the rope the box will tip up and the silage will run out, down the chute and into the cart, wagon, or on to the ground.

The blocks which hold the upper pulley are made to slide on the crossbeam so the box can be adjusted to the proper distance from the chute. The end of the rope which is attached to the crossbeam is set back 15 to 20 inches behind the block. This keeps the ropes from twisting, thus ensuring the box rising in the proper position for the rod to catch beneath the hooks on the chute.

It is essential that the lower pulley be rigidly attached to the bail of the box, but that the bail be free to swing as the box tips.

If the silage is inclined to stick to the chute at the point where the box strikes it, the tipping rod can be lowered about two inches below the edges of the box so the lip of the latter will lap over the chute, thus insuring a smooth passage for the silage.

With this hoist one man can easily raise 75 pounds of silage (two cubic feet) at a time; and because it automatically dumps itself, he will have to climb into the silo only once each feeding, no matter how many times the box needs to be filled and emptied.

For Silos in Pairs

Figure 3 shows a convenient hoist for use where two pit silos are built close together. The construction is simple, consisting of a framework set upon the edge of the silo and firmly guyed in position. A length of hay-carrier track leading to each silo is supported by a piece of four by six-inch timber. These timbers are laid upon the two two-by-eight-inch



Fig. 4. Hook shown at e in the above illustration.

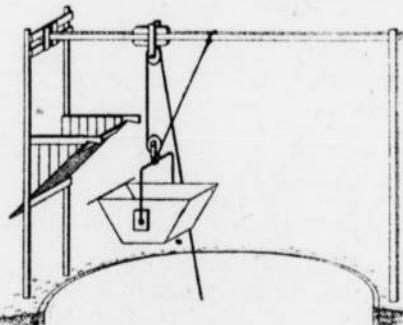


Fig. 2. A simple home-made hand hoist for pit and semi-pit silos.

crosspieces which are supported by the two 18-foot lengths of telephone poles.

As the rope unwinds from the drum one carrier may be run out, tripped, and the box allowed to lower, while the other box is being drawn out. The pulleys

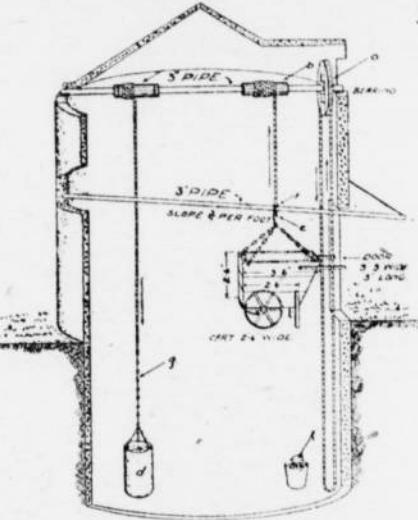


Fig. 1. Home-made hoist for pit and semi-pit silos.

may be an old milk can filled with scrap iron. It should be slightly lighter than the weight of the cart and the silage. The cart is shown in the raised position with the counterweight down in the silo. A chain is shown at G on the rope to the counterweight. This is to allow adjustment of length so the weight will just set on the silage when the hook at F is in position to allow the cart to hook on to the three-inch pipe.

The operator steps into the cart and by pulling on the endless rope raises himself and the cart sufficiently to release the hook. He then pulls on the opposite side of the rope and lowers himself into the silo. This operation raises the counterweight (d), which must be held aloft, while the box is being filled, by the pail of stones which is hooked to the endless rope. After the box is filled the operator can either pull up the load and then climb up a loose ladder, or he can step into the cart and hoist himself with the cart and feed. When the cart reaches the door the hook (e) slips over the pipe, the operator steps out, releases the hook (f), and attaches it to a convenient loop, then by means of a quick pull runs the cart on to the ground, and releases hook (e). The silage is now ready to be taken to the stock.

When the silo is being filled, the three-inch sloping pipe should be removed and replaced when the silage has been fed down to a place where the hoist is again needed.

A Practical Hand Hoist

Figure 2 illustrates a very simple yet

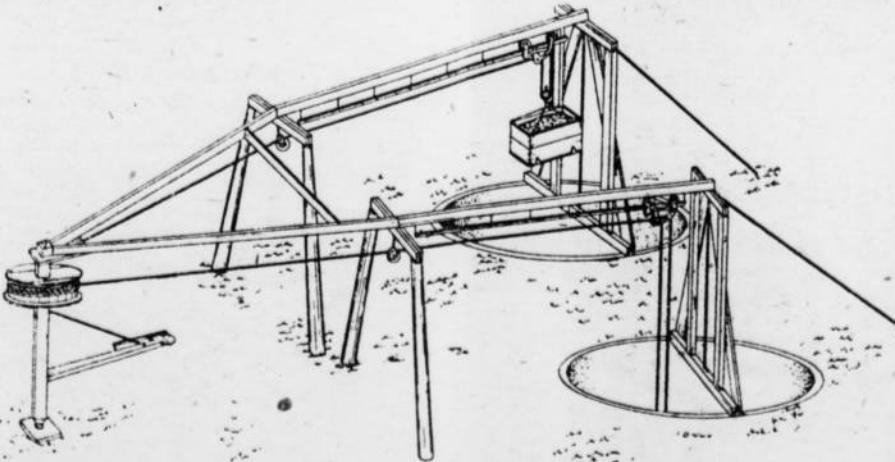
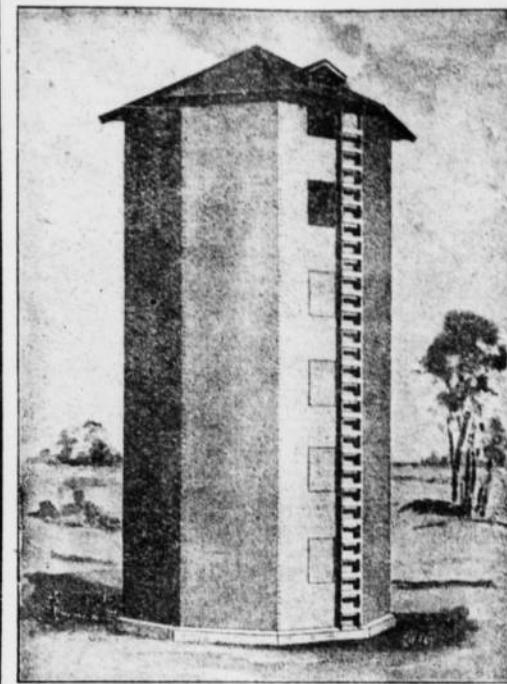


Fig. 3. Hoist which may be used when two pit silos are built close together.

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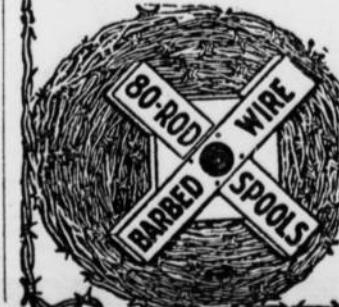
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President Manitoba Agricultural College

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Hardest Variety Known

The seed The Guide offers you was produced on President Bracken's farm at Tessier, Sask., and was grown under his own supervision. It is an extra choice sample, is tested for germination, and is subject to registration by the Canadian Seed Growers' Association.



"HE PROFITS MOST WHO ACTS FIRST"

Read What You Can Do With Arctic Sweet Clover on Your own Farm

A Fodder Crop

Sweet Clover is now recognized as one of the most valuable fodder crops that can be grown in the prairie provinces.

A Soil Improver

Arctic Sweet Clover gathers at its roots the little nodules containing nitrogen necessary to rejuvenate the soil. After pasturing it for the first and second year, it can be plowed under with splendid effect on the soil. If cut for hay, the first cutting is an excellent crop for killing weeds.

A Hay Crop

Arctic Sweet Clover, like the other Sweet Clovers now on the market, is a biennial, that is, it produces seed the second year. During the first year, however, it will grow from 18 to 36 inches in height and can be cut early for a hay crop. The second year it will give two crops of hay.

Pasture Crop

Arctic Sweet Clover makes the choicest pasture for cattle, sheep and hogs. It can be pastured the first year to a considerable extent, but the second year it will furnish pasture all through the season, because it begins to grow early, and continues growing rapidly and withstands drought better than almost any other pasture crop.

Seed for Market

Arctic Sweet Clover, when grown for seed purposes alone, will produce from 300 to 700 pounds of seed per acre, but the average yield is over 500 pounds, or about 10 bushels. There will be a good market for Arctic Sweet Clover Seed for the next two or three years. It will probably bring for two or three years from 8 to 12 cents per pound, and will be equally as profitable and more certain than a grain crop.

Complete Instructions For Handling

The Guide has prepared a bulletin containing complete instructions on the handling of a Sweet Clover crop, covering everything from the preparation of the soil and seeding to harvesting, threshing and cleaning. A copy of this bulletin will be sent every Guide reader who secures a quantity of the seed from us.

Send Us Your Neighbor's New or Renewal Subscription We Will Send You Arctic Sweet Clover Seed FREE

Arctic Sweet Clover seed is put up in sacks of six pounds, 24 pounds and 60 pounds each. These sizes are suitable for those who wish to grow it either for seed, for hay or for pasture. The sacks of Sweet Clover will be sent free, and there will only be a small express charge to those who assist The Guide by collecting new and renewal subscriptions for the paper in their immediate neighborhood. The Guide will send one or more sacks of Bracken's Arctic White Sweet Clover to any person in the prairie provinces on the following terms:

1. Six pounds of Arctic Sweet Clover Seed is sufficient for two acres sown for seed, or one-half acre for pasture. A six-pound sack will be sent free for \$3.00 worth of subscriptions, new or renewal. Your own subscription will not count.
2. 24 pounds of Bracken's Arctic Sweet Clover is sufficient for eight acres sown in rows for seed, or two acres sown broadcast for pasture or hay. A 24-pound sack will be sent free for \$7.00 worth of subscriptions, or \$4.00 worth of sub-

tions accompanied by \$4.00 extra cash. Your own subscription will not count.

3. 60 pounds of Bracken's Arctic Sweet Clover Seed is sufficient for 20 acres for seed, or five acres for pasture or hay. A 60-pound sack will be sent free for \$13 worth of subscriptions, or for \$6.00 worth of subscriptions and \$10 in cash extra, or for \$9.00 worth of subscriptions and \$6.00 in cash extra. Your own subscription will not count.

Shipment will be made from Mr. Bracken's farm at Tessier, Sask. (near Saskatoon), some time in March, in plenty of time for seeding. Express or freight charges from point of shipment are extra. Any further information required will be gladly forwarded upon application to The Grain Growers' Guide. We would recommend, however, prompt action in collecting subscriptions, as the supply of seed is limited and there will undoubtedly be a keen demand for it.

The Grain Growers' Guide

Winnipeg, Manitoba

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The Tobacco with a heart

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shown in the cut keep the ropes up out of the mud and guide them as they wind on the drum.

Hoisting with Gasoline Engine

By making or purchasing a hoisting device such as is used for hoisting hay into barns or on to stacks, a gasoline engine may be connected up to a silage hoist and do away with the use of the team and the bother of dragging the rope through the snow.

It may be possible that there are some who read these lines that have better suggestions to offer and the editor would welcome any information that can be passed along.

Computing Acreage to Fill Silo

More silos were built in Southern Alberta during the past year than in any one season since the settlement of the country. This is very encouraging, but the unfortunate feature about the situation is that very few farmers who constructed silos grew sufficient ensilage to fill them. This came about by a misconception of their capacities. A silo with a rated capacity of 100 tons means that it will hold 100 tons of cured or "made" ensilage. Considerable moisture escapes from the base of a silo as soon as the sunflowers, corn, or other fodder with which it is filled begins to settle, so it is quite obvious that more than 100 tons of green fodder must be available, otherwise it cannot be filled to capacity. This loss between the weight of the green fodder, as it is cut and put into the silo, and the weight of the cured ensilage that will ultimately be obtained is very much greater than is commonly realized. It varies, in fact, from 20 per cent. to as high as 50 per cent., depending on the kind of material used. That is to say, it requires from 120 to 150 tons of green fodder, weighed as cut, to fill a 100-ton silo. Farmers generally, during the past season, did not take this fact into consideration at planting time, so failed almost without exception to put in a sufficient area.

Sunflowers lose more in weight when put into a silo than any other crop used here for ensilage. To fill a silo of 100 tons capacity at the Lethbridge Experimental Station with sunflowers last fall required 150 tons or, to be exact, 298,240 pounds.

The results of our experiments in the growing of sunflowers at Lethbridge would lead us to believe that, in a fair but not wet season, seven to ten tons per acre is a reasonable yield to expect on dry land when the crop is put in on well prepared soil. On irrigated land, 12 to 20 tons per acre may be expected. Using these figures as a basis, a farmer can readily compute what acreage he should plant to ensure him having 50 per cent. more than the rated capacity of his silo. In a favorable season these yields will, of course, be materially increased. To avoid the possibility of having some sunflowers left over in such a season, it is better to seed a portion of the area to corn. By cutting the sunflowers first, the corn so left can be very profitably fed in the form of dry fodder any time during the winter. In districts where corn is not successful, oats, or peas and oats, might be used.—W. H. Fairfield, Superintendent, Experimental Station, Lethbridge, Alta.

Co-operative Horse Sales

The markets branch of the Provincial Department of Agriculture has just completed arrangements with eight agricultural societies, to hold horse sales during the month of March. The places and dates of sales are announced as follows:

Kindersley, Wednesday, March 15.
Wilkie, Saturday, March 18.

Birch Hills, Saturday, March 18.

Biggar, Monday, March 20.

Ceylon, Wednesday, March 22.

Ogema, Friday, March 24.

Carlyle, Saturday, March 25.

Alameda, Tuesday, March 28.

Under the arrangements entered into with the societies the Markets Branch arranges the sale in circuits convenient to buyers, furnishes rules and regulations, and looks after all advertising including personal circularization of horse dealers in western provinces. The securing of entries and local arrangements are handled by the local society.

Between 50 and 100 head of horses will be offered at each sale. The quality of horses being offered is very much improved this year over previous years judging by the advance entry lists received from several of the sales.

The Pit Silo

Small Initial Expense—Easy to Fill—Is Air Tight—Will not Blow Down nor Freeze Up—But has some Disadvantages



Marking out curb for pit silo. The board is fastened at centre, and the two spikes driven through at the other end make the two marks between which the trench is dug.

THE pit silo is not a new idea. It has been used in Europe, in a modified form, for many years. It is a recent introduction on the North American continent, but has risen rapidly in favor in localities where conditions are right for its satisfactory employment. In the states of Kansas, Nebraska and Colorado, it is said that over 1,000 pit silos were built in the first two years after their practicability had been demonstrated.

Though pit silos are very much in favor in the northwestern states, no one seriously contends that they will replace the erect or standard type of stave silo. In the cornbelt states of Iowa and Illinois, where silage making and utilization has reached its highest stage of perfection, the popularity of the erect type of silo has never been threatened. It would seem, from the experience of our neighbors to the south, that in districts where the above-ground silo is a demonstrated success, and when a farmer can finance the erection of one, he will probably get more permanent satisfaction from this choice.

Granting the supremacy of an erect silo, there will still be many farmers unable to finance a stave silo but who are willing to spend a little money for something more elaborate and permanent than the trench silo. For many reasons the type recommended in this article will appeal to them, and they may undertake its construction with every confidence that it will give them a satisfactory return for their investment. A thousand pit silos in Western Canada would be a mighty big factor in relieving a thousand families from dependence on precarious grain crop returns.

Speaking comparatively again, the pit silo has some advantages over the above-ground type. The cash outlay is only a fraction of what it costs to erect

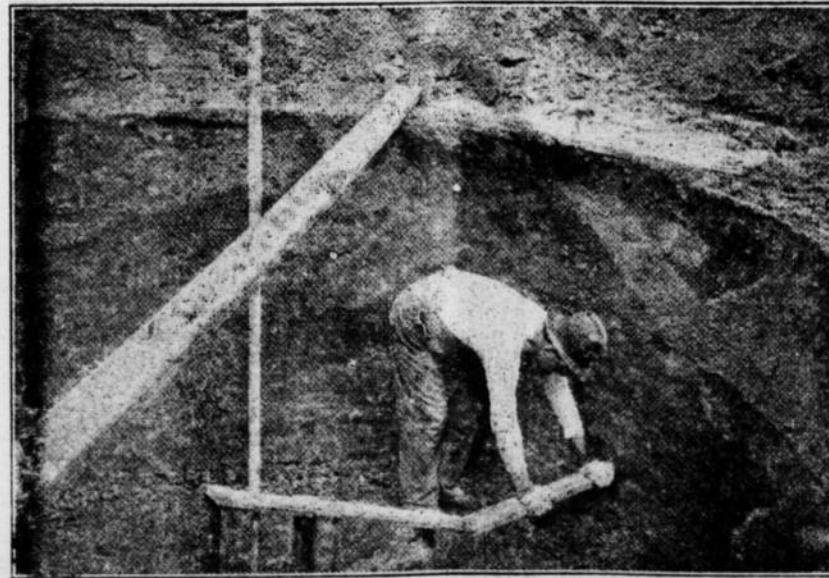
a standard silo. This is, of course, offset by the fact that pit silos require much more labor, especially in the heavy work of excavation. If a farmer was purchasing his labor, this factor becomes increasingly important unless the work is done after freeze-up. Some farmers have ingeniously utilized dry wells of the proper dimensions, in which case the cost factor is reduced to a minimum.

Not Suited For All Localities

Soil and sub-soil condition determine to a large extent the advisability of installing a pit silo. The ideal condition is a porous sub-soil which does not retain an excess of water, and a water level below the floor of the projected silo. Occasional flooding does not, however, ruin the contents of a pit silo. A record is available of one in the Red River Valley which was flooded in two successive seasons. A pump was installed for removing the excess water, and the silage in each year was fed to the last shovelful. Apart from the feed being a trifle "mussy," it is reported that the cattle ate it with apparent relish and showed no harmful effects. It is probably true that flooding does reduce the feeding value of silage. In regions where the water table is from ten to 20 feet below the surface, a common practice is to go down to water and build a portion of the silo above ground; that is to say, where it is proposed to build a 28-foot silo in a locality where the water table is known to be 20 feet below the surface, 15 feet of the silo would be submerged and the remaining 13 feet above ground.

The Location

Deciding upon the location of the silo is an important point, as it materially affects the amount of labor involved in utilizing the product. If the feeding is



Using the reamer in silo. The reamer operates at right angles to the pipe, and a knife made of strap iron, fastened to the end of the horizontal 2x4, cuts away the bank as the reamer is revolved about the pipe.

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They try others but all come back to Guide Classified ads.

Plastering Walls

After five or six feet of the silo are excavated and the walls trued, they should be plastered with a good cement mortar. The first coat can be put on about a half-inch thick and should be made of about one part cement to three of good clean sand and plastered right on to the dirt walls. If the weather is rather hot, and the walls have dried out considerably, it would be of advantage to sprinkle them so that they will be moist when the cement is put on. As it is desirable to have this cement three-quarters of an inch to one inch thick on the walls, it will perhaps require three coats to do this, as not more than one-quarter of an inch can be put on at a time after the first coat. After the first coat is put on, it will probably be possible to continue with a second, as the first coat will set rapidly. However, the second coat will require some time to set, and during this time it will be possible to erect a hoist of some kind for taking out the dirt.

There are a great many different kinds of hoists used, but the accompanying illustration shows a very satisfactory form.

After the hoist is arranged another five or six feet can be excavated, the reamer installed, and the banks trued and later plastered in the same way as before mentioned.

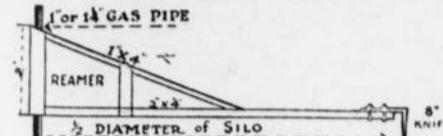
The last coat of plaster might be made a little richer in cement than the first, though it is perhaps not very essential. If the cement and sand alone are rather hard to handle, that is, if they will not stick together, it may be advisable to use a little common lime in

the first two coats, though it is not absolutely necessary to do so. A little lime will make it work easier, and apparently will not be any detriment, though the last coat should be straight cement and sand.

Cement Bottom

After the silo is built to the desired depth, the bottom may be plastered or not, though it is perhaps more satisfactory to have it cemented. If the ground is rather open more moisture may get out than is good for the silage, and it is hardly possible to have in too much, though it would not be desirable to have very much more than would be actually absorbed by the silage.

It would be best, perhaps, to round the bottom somewhat, as is usually done in building cisterns. This makes it easier to clean up the silage and also,



Plan for making reamer

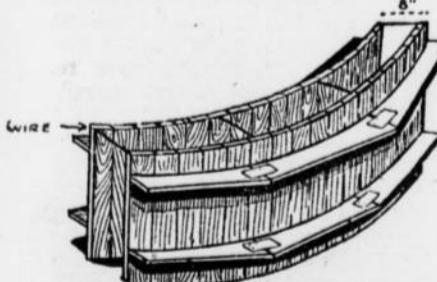
if in refilling it is desired to install a pump to pump out any excess of water, the pipe can be installed so as to pump from the lowest point in the silo.

When the silo is dug to the desired depth, and the plastering is completed, it should be given a couple of coats of pure cement mixed with water. The cement and water should be mixed until it has about the consistency of cream, and then applied with a good whitewash brush. It should be made thin enough so that it will fill up all the crevices in the cement. This is very essential for making the walls airtight. If the cement wash is applied too thick it will often set and then peel off, consequently it should not be too thick. It will also probably be found advantageous to cement wash the walls every fall before filling.

Build Curb Above Ground

After the silo is completed below ground, it is best to build a curb at least two or three feet above the ground, so as to prevent stock from getting into it, and also to make it handier to put on a cover and doors. For doing this a section of form six to seven feet long can be built and set up on the curb. This curb need not be as thick as the foundation in the ground, though perhaps eight inches would be as thin as it should be built. The inside of the curb above ground should, of course, be just even with the inside below ground, so that there would apparently be a continuous wall. When this section of curb is built, the form can be removed and set up at one end, and another section built. The mixture of concrete can be the same as was used in the curb below ground.

The advantage in using a sectional curb is that it does not require more than one-sixth or one-seventh of the



Mold for above-ground section

lumber to build it as it does if the curb is all built at one time. By putting a bevelled 2x2 on the inside of the form at one end, a good strong union can be made with the next section that is built. It is advisable to use reinforcement rods by letting them stick through the end of the form so that they will be incorporated in the next pouring.

After this curb is completed above ground a good cover should be built over the silo. It is not necessary to build this for the purpose of keeping out rain, as the water which falls in does not damage the silage at all. The main objects are to retain heat in the winter time, and to keep the silage from drying out too rapidly on top.

Due acknowledgement is made to the International Harvester Company for use of illustrations and information.

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Hundreds of new and renewal subscriptions are being received by The Guide every month. Why don't you send in one or more of those that will be sent in anyway from your neighborhood, and, as a reward, let us send you, free and postpaid, one or more of the valuable prizes shown below. These prizes have all been selected with great care—are of high quality and exceptional value. You will be delighted with them.

SAVE MONEY—DO YOUR OWN TANNING

You can successfully prepare your own hides or pelts for any uses you require. No experience necessary; tools all home-made, and but few chemicals (which you can get from your druggist) to buy. The tanning section of The Guide's new book, Trapping, Tanning and Taxidermy, covers the following practical subjects: Home-made tools (described and illustrated); preparing skins for tanning (salting, beaming, softening, fleshing, stretching, drying, breaking and cleaning); tanning liquor for use in making robes, etc.; how to make robes from horse, cow and sheep hides; how to make leather from hides or pelts (loosening and removing hair, skinning, scouring, stuffing, graining, blacking); preparations to use in tanning and blacking leather; how to tan rawhide; how to tan deer-skin for gloves and how to make it buff color; how to make glove leather from calf, dog, lamb or cat skins; how to remove wool from sheep hides.

TRAPPING, TANNING AND TAXIDERMY

is the only book of its kind. It was prepared especially for Guide readers by Frank Tose, an expert trapper and taxidermist. The tanning section is described above. The trapping section covers traps, deadfalls, snares, lures and scents. It also gives separate detailed instructions for trapping each fur-bearing animal common to the Canadian West. The taxidermy section contains instructions anyone can follow for skinning, stuffing, mounting, etc., of animals, birds, fish, etc.; making fur rugs, with and without heads, mounting and polishing horns and hoofs, mounting heads; how to make, at home, the necessary preparations and tools. The outstanding thing about the book is the plain manner in which it is written, the clearness of the instructions and the wealth of detail both in description and illustration. Mr. Tose is a master in the fields of trapping, tanning and taxidermy, and yet he has written a book that any beginner can take and follow successfully. The experience he has gained in years of study is boiled down for you in simple language. Methods and preparations that have made his work so successful are given freely for your use. The book has 128 pages and 119 illustrations. Every tool required can be made at home. The book will save you money and turn waste material into profit. You can secure this book only from The Grain Growers' Guide. It is not for sale, but we will gladly send you a copy free and postpaid if you will send us one new or renewal subscription (not your own) for one year at our new Low-Price Offer of \$1.00. Send \$1.00 with the name of the person whose subscription you are forwarding and Trapping, Tanning and Taxidermy will be sent you by return mail.

A LABOR-SAVING, MONEY-SAVING HOME

For a long time The Guide has been searching for information on better home-making and management. Three ideals were sought—to conserve labor, to reduce expense and to make the farm home convenient, livable and likable. Now The Guide has achieved its ambition in its new book, The Country Homemaker. The different subjects in this book have been written by different persons, each an authority in his or her line. It covers the full range of household management, as shown by list of contents printed below. In all cases the methods advocated have had to prove up not only under scientific test but also under practical, farm-home conditions.

THE COUNTRY HOMEMAKER

is a book that will save your steps and your dollars. Everything recommended you can apply at home with materials and equipment you are accustomed to using. You'll find in it chapter after chapter explaining in a clear, simple way many things on which you have sought information, but which are not readily available in printed form. An abbreviated table of contents follows: CLOTHING—Making Paper Dress Forms, Reading Patterns, Adjusting Patterns, Cleaning, Pressing and Dyeing Clothes, etc. LAUNDRY—Softening Hard Water, Simple Soap Recipes, Removing Stains, Winter Washing, Short Cuts, Washing Delicate Fabrics, etc. HOUSE FURNISHING—Making the Winter Living-room Livable, Making the Most of Pictures, Artistic Walls, Crocheted Mats and Rugs, Home Lighting, etc. LABOR SAVERS—Planning a Week's Work, Home Labor Savers (home-made), Fireless Cooker, A Labor-Saving Kitchen, Home-made Dish Drier, Financing the Farm Home, etc. SUNDAY—Pretty Vases from Old Jars, What to Do for Poisoning, Banishing Insect Pests, Cleaning Woodwork, Child Training, Hot Luncheons, etc. The Country Homemaker is not for sale anywhere and can be procured only from The Grain Growers' Guide. We are not selling it, but will gladly send you a copy free and postpaid if you will send us a neighbor's new or renewal subscription for one year at our new Low-Price Offer of \$1.00. The Country Homemaker has 128 pages, 26 chapters; is printed on good paper and is illustrated with photographs, diagrams and drawings.

THE COUNTRY COOK

is a book written solely for farm women. The best that science offers in modern cookery is in this book—but it is adapted to the needs, stock and equipment of the farm home. Furthermore, through gifts, contests, correspondence, etc., hundreds of exceptional recipes that have stood the test of country cooking have been gathered and the choicest selection is incorporated in this book. A third feature of interest, which is particularly important just now, is the attention given to economy in cooking, which is emphasized from cover to cover. The Country Cook is a brand new, 128-page book, well printed and strongly bound. To really appreciate it you must see it. It is not for sale, but we will gladly send you a postpaid copy FREE. Send one new or renewal subscription (not your own) for The Guide for one year at our new Low-Price Rate of \$1.00 for one year, and we will send you The Country Cook free and postpaid.

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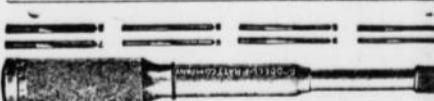


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THE GRAIN GROWERS' GUIDE

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Diamond Ware is a three-coated enameled steel, sky blue and white outside with a snowy white lining. Pearl Ware is a two-coated enameled steel, pearl grey and white inside and out.



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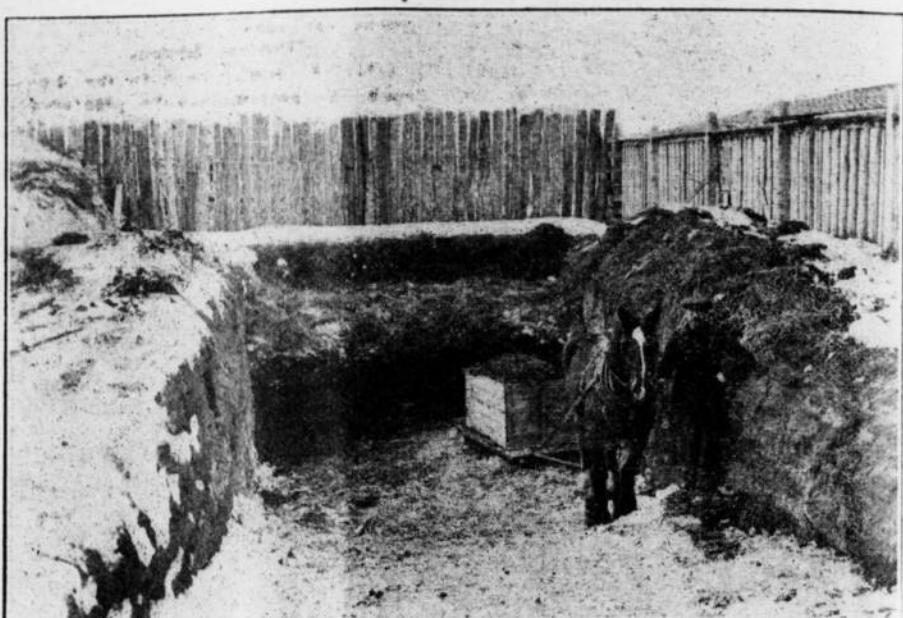
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The Western Home Monthly
Winnipeg - Manitoba



The Trench Silo



The trench silo is the simplest of all in the matter of filling and removing ensilage.

Are you only half convinced as to the practical value of a silo? George H. Hutton, one of Alberta's foremost authorities, contributes this article on an inexpensive temporary substitute for a standard silo which will enable you to prove to yourself the relationship between silos and an unfailing income.

In Nature's wisdom it has been ordained that cattle give best results when supplied with an abundance of succulent fodder. June pastures have frequently been named as the ideal condition for economical production of milk and beef. If by a system of pickling grasses or similar fodders we can make them available for a much longer period or even during the entire season when good grass is out of season, we will have accomplished a result which will contribute toward the production of maximum quantities of milk and butter fat at minimum costs. Such a result can be achieved by the use of silos and silage crops.

As the average farmer approaches the question of the advisability of engaging in this new line of endeavor, he is confronted with two main questions, first the choice and production of a suitable ensilage crop; second the acquisition of the necessary equipment. A few years ago the first was a real problem, but the advance made latterly with sunflowers, extends considerably the northern limit of successful silage production. There is an understandable reluctance on the part of many to incur the expense of putting in silo plants till they have had some experience in a small way at least with this innovation. To these men the trench silo has much to recommend itself. It gives the cautious man an opportunity to demonstrate to himself the advantages that follow in the train of silage production and utilization, and it is safe to say that if the construction of these could be encouraged the widespread adoption of more elaborate types of silos would rapidly follow.

In planning the crop which is intended for storage in a trench silo, it is well to remember that fodder which is light in weight does not pack sufficiently in a shallow pit to ensure a total exclusion of air, a cardinal necessity in the production of good quality silage. It is questionable if oats, or oats and peas, or for that matter any combination which includes a considerable proportion of hollow-stemmed plants would pack sufficiently of its own weight. Both corn and sunflowers will be found heavy enough for use in a trench silo.

Good Temporary Expedient

In recommending the trench silo I do not for a moment disparage any of the types of silo now in use as a means of storing feed. They are all good and have certain advantages in the way of convenience of feeding, particularly where cattle are housed, which the

trench silo does not afford. They have one disadvantage however, to thousands of farmers in Western Canada, and that is that they cost money, and many men are so financially involved that the cheapest type of ordinary silo is a large item to them, and absolutely prevents them from erecting such a building. The trench silo affords a method of storing feed which is inexpensive apart from labor, and most men who are struggling to get on their feet are willing to make an expenditure of their own labor in order to achieve success.

The quality of the feed so stored appears to be quite equal to that stored in the ordinary silo. It may be argued that there is a certain loss of moisture by drainage and the point is doubtless well taken. I have no figures to show the relative food value of silage from the same field cut at the same time and stored, one lot in the trench and one in the ordinary silo. But I am assuming that the value of such moisture so lost by drainage is not high, and I am certain that the silage stored in the trench will give excellent results, as we are now feeding some sixty-five late summer and fall calves in the open on sunflower silage from the trench silo. These calves are making excellent growth, and I have seen no thrifter lot this year, nor at any time. My argument is, therefore, that even though there may be some loss of food value through moisture which drains away from the trench silo the fodder which remains is highly nutritious and superior to any fodder ordinarily available.

Simplicity

The methods of construction of the trench silo is simple. It consists of an excavation on a fairly well drained site. It is not lined with cement or lumber, nor is it provided with curbing to permit the filling of the silo above the surface. It is simply an excavation. It is about eight feet deep, sixteen feet wide and can be as long as desired, depending upon the size of the herd and the material to be stored. It is fed off one end, like a loaf of bread. The daily capacity per animal is from forty to fifty pounds, depending on the quantity of straw, hay or grain (if any) which is being fed. The weight of a cubic foot of ensilage in a trench will average about thirty-five pounds, and based on the above figures the length of the silo required to accommodate sufficient feed for the herd can be readily determined.

The cutting box was set up outside the trench and a short length of pipe and the hood provided the necessary piping

Continued on Page 30

Co-operative Silo Circuits

Silage Operation is the Enterprise Par Excellence which lends itself to Neighbourhood Co-operation

A DOZEN years ago the silo was regarded as a doubtful proposition in Western Canada. Last year 500 wood stave silos were bought and erected, and no one knows how many pit and trench silos were put into commission. A dozen years from now Canadian farmers will build silos, not because all of them want to, but because as livestock raisers they will have to in order to meet the competition of their neighbors who do have silos. The silo question is going to be settled in the way the binder question was—the farmer of the future will have to economize on his feed in the way the farmer of today has to economize on his labor.

Unquestionably the one factor today that retards silo expansion is the money outlay involved. Expensive as silos are, they constitute only the first charge. Silage cutters, the provision of power machinery to drive them, corn binders, cultivators and planters are all in order more or less necessary. True enough, some of these may be replaced with temporary makeshifts, but every farmer is perspicuous enough to see that these expedients entail more labor and do the job less efficiently than the standard implement, and that it is only a matter of time before these too would have to be purchased. And he is asked to go to this expense in order to conduct what looks to him like a radical experiment. Small wonder that in this last year of money stringency so much headway was made!

Difficulty Suggest Co-operation

Obviously the way out is through co-operation. Even more than grain threshing, silo building and operation calls for joint neighborhood action. If silos are erected by a contractor who has to be brought out from the city, his charge will be less if he obtains several contracts in one locality, for he only has to bear the expense of shipping his equipment once. If stave silos are erected with home labor resources, it will be found that it is a job on which it pays to have many hands working for a short time, rather than for two men to go through to completion unaided. This is true to a lesser extent with pit silos, while the trench silo is a slush-scraping undertaking and the size of the gang is just about inversely proportionate to the time taken.

When it comes to sharing the financial burden of the implement bill, however, the advantages of co-operation are immediately manifest. In fact, a little co-operation on this point will make possible a good many silo projects that otherwise would be impossible. Three men working together can buy one implement each. A cultivator, a corn binder and a silage cutter are suffi-

cient to start with. Engines are now so common that it may be assumed that one of the three is already in possession of one. If a fourth partner were taken in, his contribution might be a corn planter, although in the sunflower growing areas this may be entirely dispensed with.

Arranging Program

During the growing season the cultivator will be passed from farm to farm, but during the harvest silage crop co-operators will find it necessary to concentrate forces. Silo filling cannot be done advantageously with a gang of less than six, and eight is better. The binder calls for one man's services, one will have to tramp in the silo, and, by the way, let him be the best man in the lot, for a cigarette and a rocking-chair have no place in a silo. The engine will call for one man's supervision. If the silage cutter is not a self-feeder, this will keep another

man busy. It will require three teams hauling bundles if the machinery is to be kept working continually. Another man loading in the field will not come amiss. The applicability of neighborly co-operation to a situation like this will appeal to any man who has hired expensive transient day labor in the fall of the year.

Then, too, there is the psychological aspect of co-operation. A good many men would be ready to undertake a new project of this kind if they knew that just over the fence were neighbors wrestling with the same problems. Somehow the risk attendant upon a new departure seems divided if several kindred spirits tackle it at the same time, doesn't it? And what is more it makes better neighbors if they are the right kind to start with. We are all familiar with the fellow who returns your fanning mill broken just about when you want it the following year, or who shows up about eight o'clock on the mornings when he is trading work. These are good people to avoid in forming a silo circuit. Happily they are in the minority.

Now, here is a suggestion for United Farmer locals to put into effect at their next meeting. Let the secretary put on the program a discussion on the practicability of producing silage. A good lesson can be learned from the Bird's Hill local of the U.F.M. From just such a move on the part of the secretary, Mr. DeVisser, a local potato shipping association was formed which will probably handle 200 cars of produce in 1922 and save a tremendous sum of money for the district. Out of a discussion initiated in the same manner, several silo circuits might arise around the one local, to the lasting benefit of the community.



Heavy Duty

Cutting sunflowers on the Manitoba Agricultural College Farm. Some of these sheaves weighed 42 pounds.

Westclox



For extra furrows

THE days are getting longer. It's time to think about spring plowing. Westclox will help you get more done each day.

Put 'em on the job at night. They'll get you there on the dot in the morning.

There's a lot in the old saying that where a Westclox is wound up the farm will not run down.

Hunt up the man who sells Westclox in your town. For, after all, he sells

the most important farm implement you can buy. Good, honest timekeepers—clocks and watches—at good, honest prices.

There are nineteen models of Westclox. Prices range from \$2.00 to \$7.00.

Look 'em over and pick the ones that best suit your eye and purse.

You can tell them by the orange and buff, six-sided tag, and the trademark, Westclox, on the dial.

Western Clock Co., Limited, makers of Westclox
Peterborough, Canada

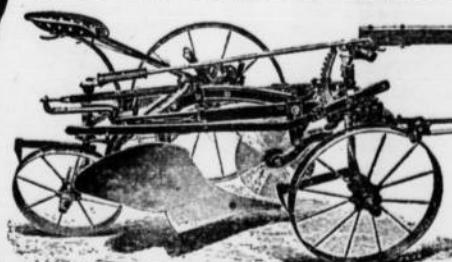
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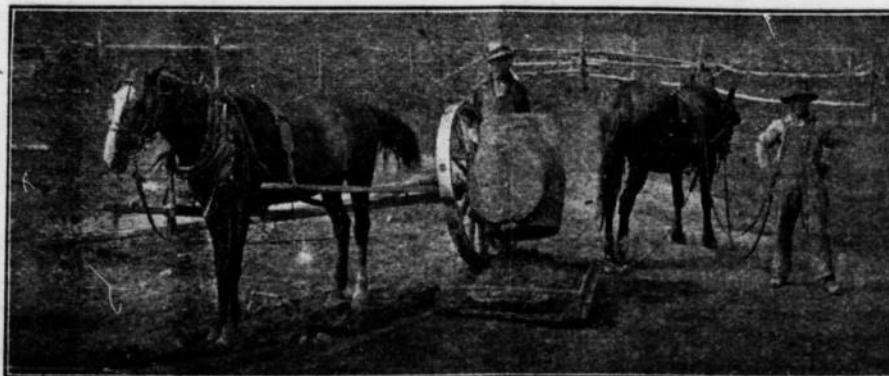
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Are you building a concrete silo? This idea will save labor.

Farmers Want Wheat Board

Memorandum Presented to Government by Western Delegation

THE following memorandum was presented to the Dominion government on March 15, by the following delegation appointed at the last meeting of the Canadian Council of Agriculture, to go to Ottawa to ask the government to re-instate the Canada Wheat Board: H. W. Wood, Hon. J. A. Maharg, J. Robinson, C. H. Burnell, C. Rice-Jones, R. W. E. Burnaby and N. P. Lambert.

Memorandum to the Dominion Government regarding the re-establishment of the Canada Wheat Board:

Resolved:

That this Council favors the re-instatement of the Canada Wheat Board for the handling of the 1922 wheat crop, and until such time as world conditions again become normal.

The foregoing resolution was unanimously adopted at the annual meeting of The Canadian Council of Agriculture, which was held in Regina, on February 28, and was attended by the executive heads of the United Farmers of Alberta, the Saskatchewan Grain Growers' Association, the United Farmers of Ontario, the United Farmers of Manitoba, the Saskatchewan Co-operative Elevator Company, Limited, and the United Grain Growers, Limited. Similar resolutions were also unanimously adopted at the large annual conventions of the farmers' provincial associations in middle Western Canada, and this delegation from the Canadian Council of Agriculture has come before the government to convey the representative demand from the farmers of the prairie provinces for the re-establishment of the Canada Wheat Board and, if possible, to strengthen that demand by a detailed statement of their case.

In the first place, we ask for the reinstatement of the Canada Wheat Board, not as a permanent institution, but as a temporary measure of relief. We also ask for it in the belief that, under present abnormal marketing conditions, the government can approach this matter in the light of national necessity, and not as a mere favor to the farming class. The Wheat Board was so appointed in 1919. Despite the expectations of a rapid return to normal conditions, which were held out at the time of the Wheat Board's discontinuance in the summer of 1920, our markets have been subject to very abnormal conditions almost constantly since that time.

Wheat Exports Important

Wheat is possibly the largest single item in the trade and commerce of this country. Because of the large and important place it holds in the list of exports from the Dominion, wheat is a vital factor in our present problems of exchange and national finance. The trade statistics of the past two years afford sufficient proof of the importance of wheat in the business life of Canada. Exports of wheat from Canada during the twelve months ended December 31 last, amounted in volume to 146,855,156 bushels, valued at \$214,604,099. In the twelve month period ended in December 1920, exports of Canadian wheat amounted to some 123,000,000 bushels and were valued at \$312,312,765. The total values of all exports from Canada in the calendar years 1920 and 1921 were, respectively, \$1,268,657,000 and \$802,699,000. Therefore, it may be seen that wheat in 1920 and 1921 represented over 25 per cent. of the total value of the exports of this country. Over a much longer series of years, the official figures show that wheat has been a most important factor in our international trade, and consequently in national finance.

Anything that can be done to improve marketing conditions at the present time, and ensure a higher average return for his crop to the producer of wheat, therefore, is worthy of the serious consideration of the government and parliament of Canada.

Will Hearten the West

We do not believe that the return of the Wheat Board would be accompanied by a return of the high prices for wheat, which were realized in the season of 1919-20. It is generally recognized that war prices of grain and other commodities



One Lady Says:

"Tell them to try Puffed Rice on apple sauce"

Every month, in magazines going to 25,000,000, we are urging housewives to mix Puffed Rice in every dish of fruit. It makes a delightful blend. But one woman writes, "Mention sliced apples or apple sauce. That's where we find it delicious."

Not like other cereals

Puffed Wheat and Puffed Rice are unique foods—the only grain foods of their kind.

They are scientific foods—invented by Prof. Anderson. Every food cell is steam exploded and thus fitted to digest.

They are whole grains in which every granule feeds.

That was the maker's object—to offer whole-grain diet in its ideal form.

But also food delights

Explosion puffs the grain to bubbles, eight times normal size. The texture is like snowflakes, the flavor is like nuts.

So these are food confections. Children revel in them. Their love of Puffed Grains has won millions to a daily whole-grain diet.

Those are the reasons for Puffed Grains. They tempt children to the diet you desire. They make all elements available as food. Serve them in place of lesser foods—morning, noon and night.



Puffed Wheat Puffed Rice

Serve in every bowl of milk. It forms a practically complete food, rich in 16 needed elements.

For breakfast, luncheons and suppers. Also airy, toasted wafers for your soups.

The queen of breakfast dainties. Also douse with melted butter for hungry children after school. Use in candy making or as garnish on ice cream.

Every grain tastes like a nut meat puffed.

The Quaker Oats Company

Peterborough, Canada

Sole Makers

Saskatoon, Canada

million bushels of western wheat remained in the hands of our farmers to be marketed. Only 30 millions out of a crop of 260 million bushels, remained to be marketed by the farmers after the prices started to advance at the end of January. The result is that the vast majority of grain growers of the middle west today possess only about 75 per cent. of the purchasing power which they possessed in the years before the war; and that is the principal reason for the severe commercial depression in the prairie provinces at the present time. Further reference will be made presently to the competitive selling of wheat on our markets in the autumn months, resulting in lower returns to producers, and a smaller volume of business all round.

Situation in Europe.

Commodity prices did not begin to decline in England and the allied and neutral countries of Europe until last summer, one year after the commencement of the slump on this side, and they have not shown anything like the weakness which has characterized our markets. At a low point in November last, British prices were still considerably higher than the pre-war level. In Britain, France, Italy, Belgium or Spain, the producer can buy with a bushel of grain as large a volume of manufactured goods as could be bought before the war. In middle and Eastern Europe, however, prices have not even started to decline as yet. Inflation instead of being checked, has increased during the past year, and trade with the outside world has been curtailed. In Germany, Austria, Hungary and Roumania, the value of money has decreased very greatly and prices have risen. Farm production has been stimulated in those countries, but at the same time, because of rapid inflation of money, purchases from outside have become increasingly difficult. Here, the governments still control much of the food supply, and direct the extent of imports and exports. Prof. G. F. Warren, head of the Bureau of Economic Research, at Washington, in an address delivered recently before the agricultural conference, called by President Harding, told of conditions of government control in Germany as follows:

For example, in Germany two-sevenths of the wheat crop is taken at a fixed price of 2300 marks per metric ton. This price is fixed until next summer. It is about 33 cents a bushel, or less than one-third of the world price. The German government needs to import about an equal amount. It sells the requisitioned grain and the imported grain at approximately two-thirds the world price. Since exports are prohibited these sales control the German market. For example, on October 14, requisitioned wheat was 2300 marks. The world price, as indicated by price in Rotterdam, Holland, was 6160 marks, and the Berlin price was little more than half-way between or 4800 marks. The farmer is allowed to sell the remaining five-sevenths of the crop for all he can get, but this of course for no more than the price at which the government sells. Oats, barley and rye are similarly controlled in Germany. Roumania takes one half of her wheat exports at about 30c to 40c a bushel.

European Prospects Not Good

In all of Europe, efforts are being made to be self-sufficient so that no importing will be required. Judging from the figures which Prof. Warren presented in his address, Europe is still rather distant from pre-war production of wheat. Before the war, he said, Europe, exclusive of Russia, produced a five-year average of 1,242 million bushels of wheat. In 1920, it produced 936 million bushels, and in 1921, the production was up to 1154 million bushels, which was due in large part to an unusually favorable season. Indications for this year are not so good in Europe, owing to an unfavorable period for seeding winter wheat crops last autumn.

To summarize the European situation in its relation to ourselves, it is simply this: a portion of the remoter fields of production have again come into competition with our grain growers, while consumption in those same areas has been lessened by disturbed political, financial and industrial conditions. It is necessary to adjust supplies of wheat in this country to the conditions that now exist in the world's markets; and to do this properly we should have the full advantage of a marketing agency which would be in a better position

than the individual seller or producer is in today, to get comprehensive and carefully analyzed information about world conditions.

An American Opinion

Just before the Canadian Wheat Board was discontinued in July, 1920, the War Finance Corporation was also discontinued in the United States by the Administration at Washington. Eugene Meyer, junior managing director, of that Corporation, which has been re-instated by the Harding administration to take charge of a billion-dollar fund to be used in the marketing of farm products in the United States, said, at the agricultural conference in Washington, in January:

I believe now, as I believed then, that the War Finance Corporation—if it had continued to function—would have been able to mitigate the suddenness and extent of the collapse in commodity markets and prices, in the fall of 1920, which seriously affected the whole business machinery of the nation, and caused acute distress in the agricultural districts.

Our people on this side of the line feel exactly the same way about the discontinuance of the Wheat Board in the summer of 1920. They knew that the price of wheat could not remain on the high plane of 1919-1920, but they were not prepared for the entire lack of buying support which the market experienced in the autumn months of 1920, and again during the corresponding period in 1921.

Necessity for Board Urgent

The Wheat Board is necessary because it would mean the more orderly marketing of the wheat crop, thus enabling Canada to meet the changed conditions of the consuming foreign markets and of the domestic markets as well. We need the machinery that will make possible a twelve month's system of marketing our wheat production, instead of three or four month's system as it now is, under existing conditions. Immediately after the Canadian harvest almost every combination known to man is employed to force the farmer to market his wheat. Accordingly, under pressing financial conditions such as the country is feeling at the present time, the bulk of the farmer's wheat is thrown on the market between September 1 and the close of navigation on the Great Lakes, early in December. With the uncertainty of the export demand from abroad, and the well-directed operations of the representatives of foreign buyers on our exchanges, the period of heavy receipts of farmers' wheat in the autumn months is bound to be characterized by needless declines in prices, and consequent losses to the farmer and the numerous interests dependent on him. Under the present uncontrolled marketing system, the bulk of western wheat leaves the farmer's hands during the first three or four months of the crop year. James Stewart and F. W. Riddell, former chairman and vice-chairman of the Canada Wheat Board, in a special report to the Saskatchewan government on this subject last year, said:

Statistics show that under the present system seventy to seventy-five per cent. of the crop is thrown on the market during a period of three months. With proper financial and other support the movement of the crop would be more evenly spread over the whole crop year, thereby undoubtedly avoiding gluts of grain, and consequent depression of prices, which usually occur during the first three months of the crop movement.

The present system leans altogether too much to the side of the foreign buyer of our wheat. Our farmers, on the one hand, are pressed from all sides to liquidate their crops in the first three months of the season. They become, by force of circumstances, an organized crowd of competitive sellers. On the other hand, the principal buying from abroad is concentrated in the offices of a few powerful firms. While actual government control in Europe is confined to the central and eastern countries, grain supplies for the entire continent during the past two years have been handled largely through four or five big commercial agencies. On our Winnipeg market these agencies are represented, and as was the case last fall, they can use all their influence to depress prices by selling the October and December options short, before our crop begins to flow on the market. In other words, they help us to sell our own wheat at as low prices as possible.

Continued on Page 30

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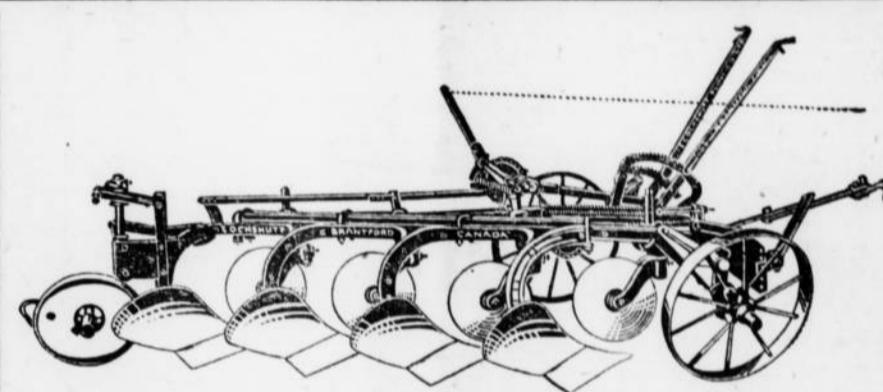
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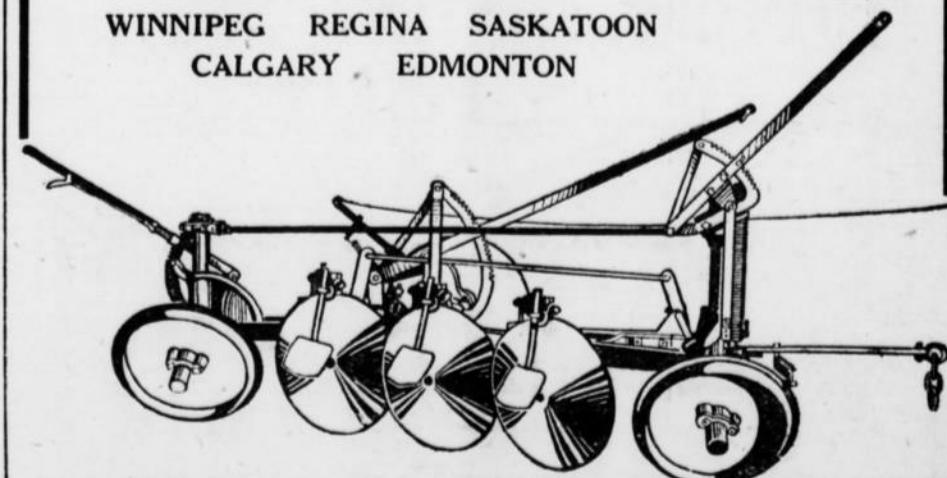
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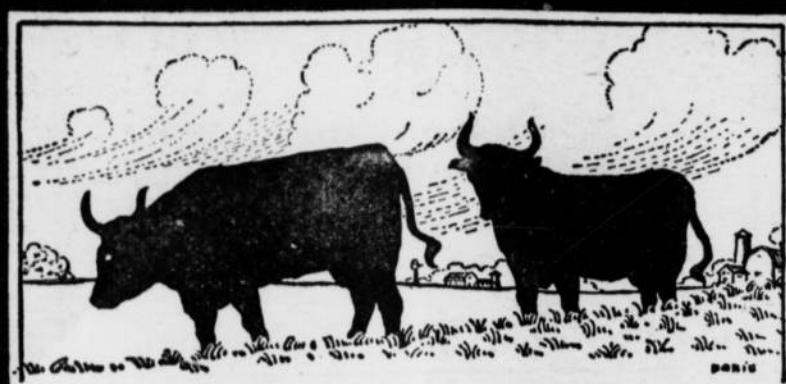
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Insurance and Investment

Enquiries frequently come to The Guide asking if such and such a life insurance company is safe to insure with. Almost invariably the answer is "Yes," because life insurance companies to do business in Canada must be licensed either by the Dominion or provincial governments, and are required in either case to deposit with the government a substantial sum for the security of the policy holders. In addition the government which issues the license exercises supervision over the company and requires it to maintain a certain standard of reserves.

It is one thing, however, for a life assurance company to be safe to insure with, and another, and a very different thing for its capital stock to be a good investment. Most of the old-established life companies pay substantial dividends to their shareholders, but a new company cannot possibly pay dividends on its capital until it has been in business for a number of years.

Organization Expensive

When a new life insurance company is formed its business at first is small and the cost of operation proportionately large. The stock is usually sold at a premium in order to cover commission and expenses in selling the stock, and a life insurance company that can get through its first few years without having deficits and suffering an impairment of capital is exceptionally fortunate in its experience. Then when the business is actually on a paying basis it is necessary to build up a surplus in order to secure the confidence of the public and to put the company in a position where it can distribute profits on its participating policies and be able to withstand a possible epidemic with an abnormally high death rate.

Rich Man's Investment

It may take five, ten, or fifteen years to attain this position, and in the meantime the shareholders must exercise patience and wait for a return upon their investment.

If a man is wealthy and can afford to wait an indefinite period for dividends, an investment in a new life insurance company may be quite an attractive proposition, but the man who is looking for an immediate return upon his money must seek other channels of investment. The conscientious stock salesman will point out these facts to a prospective investor, but unfortunately all canvassers are not so particular and it is necessary for those with money to invest to be on their guard so as to avoid disappointment.

A Model City

The building of Canberra, the new capital of the Australian Commonwealth, which was discontinued during the war, has been resumed and large numbers of men are being employed. Canberra, when occupied, will be unique among the capitals of the world. It is an entirely new city, and is being built in virgin territory. The district comprises 900 square miles, and title to the entire area is to be held in perpetuity by the Commonwealth government. Private tenure will be by lease only, and the rental must be not less than five per cent. of the unimproved value of the land, reappraisal of the land to take place 20 years after the original date of the lease and every ten years thereafter. Building must begin one year after the granting of the lease and completed within another year. The Crown reserves all mineral rights.

Under this scheme it is anticipated that taxation will be unnecessary, the revenues required by the city being provided by the ground rents. Credit for the adoption of this scheme belongs to Edwin Burley Griffin, a Chicago single taxer and architect, whose plans for the capital were accepted as the result of a competition participated in by many of the most distinguished architects of the world.

Every man before getting married should take out a life insurance policy. Then he will know two things: first that he is in sound health, and second that if he does not enjoy long life or accumulate wealth he will at least leave his widow enough to bury him.

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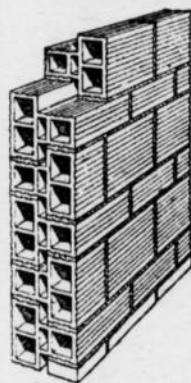
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The Money Question

Canadian Money and Progress is the title of an interesting pamphlet on the banking and currency question recently published by W. C. Paynter, of Tantallon, Sask. Mr. Paynter is very outspoken in his criticism of the present banking system of this country, and particularly condemns the provision in the Bank Act under which the banks are permitted to issue their own notes which are used as currency.

"If the government of Canada," he says, "would cancel all bank charters when they run out in 1923 and thereafter allow nothing else to be issued except unconvertible Dominion notes, and issue them in payment of work done in the development of our great natural resources, building highways, schools, irrigation works, and against interest-bearing bonds for say two per cent., sufficient to pay the expenses of the first cost of the bills and the bookkeeping attached thereto, to provincial governments, cities, town and villages, that is all that is required to make Canada a hive of industry the like of which has very seldom been seen in the world's history."

Mr. Paynter gives historical examples in support of his contentions, which add greatly to the value of the pamphlet. Copies can be obtained from the author, price ten cents.

Lower Interest Rates

A drop in the rate of interest demanded upon first-class mortgage loans may be expected in the comparatively near future. In the best farming districts of the United States rates have already fallen a half of one per cent., and farmers offering good security in Indiana and Ohio are obtaining loans from the big insurance companies at six per cent. The interest rate on government bonds, both in the United States and Canada, has fallen perceptibly in recent months, indicating that the supply of money available for investment has increased, and a lower rate on mortgages will naturally follow. The life insurance companies all have a large amount of new money to invest each year and a considerable portion of this always goes into mortgages, both on farm and city property. The mortgage and trust companies are also increasing their resources, and with the improvement of sterling exchange British money will soon be available for investment in this country.

Prompt Payment Essential

This, however, does not mean that the bulk of the farmers of Western Canada will be able to secure loans at a greatly reduced rate. No matter how plentiful money may be, loaning agencies will not lend at a low rate of interest unless the security is of the highest class and the financial position and earning capacity of the borrower such that the prompt payment of interest and principal are assured. Collections on mortgages in Western Canada in the last couple of years, owing to unfavorable crop and marketing conditions, have not been entirely satisfactory, and it is natural that under these circumstances lenders should seek compensation in higher rates than would otherwise be demanded. Where the security is first-class, however, and where the prompt payment of principal and interest is assured, mortgage rates from now on should tend to a lower level.

Ontario Savings Bank

The first Toronto branch of the Ontario Provincial Savings Banks was officially opened at 110 University avenue, on March 1. Other branches have already been opened in Alymer, Woodstock and St. Mary's.

The Ontario Provincial Savings Banks are being established on similar lines to the Province of Manitoba Savings offices, and will supply funds to be loaned to farmers through the rural credits system.

Perhaps the safest possible method of providing for old age is by the purchase of a Canadian Government Annuity. Annuities can be purchased to commence at once or on reaching a given age, and payment may be made either by a lump sum or by instalments spread over any number of years. The local postmaster can supply all information.



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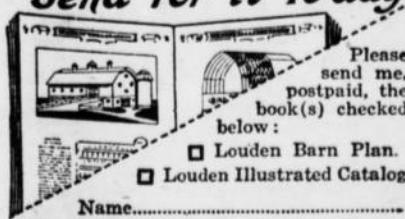
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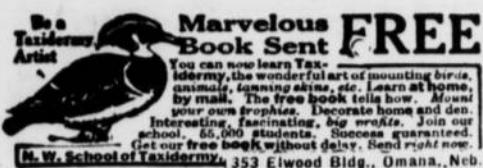
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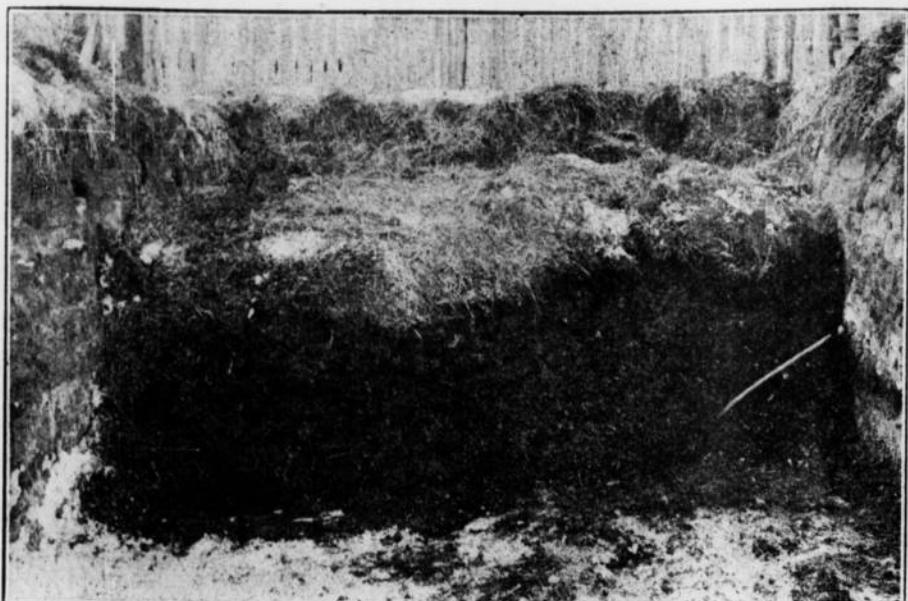
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The Trench Silo

Continued from Page 24



While the ensilage from the erect and pit silos is removed in horizontal layers, from the trench silo it is taken from the end as slices from a loaf of bread.

The silage was distributed and well tramped. This year the trench was filled only to the level of the ground, when it was well covered with straw from an old stack bottom. I think it would be an improvement to round up the silage above the level of the ground a couple of feet, keeping it well tramped for two or three days, when the silage has finished settling the trench would then be approximately full. The straw or other covering to be used could then be put on. The trench method of storing has kept the silage with practically no loss and the quality of the fodder, as stated previously, is first-class.

Other Economies in Outlay

Conditions demand the strictest economy in the handling of any of our fodder propositions, and if the dairyman is prepared to do some manual labor in the way of cutting the crop by hand, the only equipment that he will require in order to provide his stock with ensilage in abundance is a cutting box, the purchase of which could be handled by the community or a group of farmers, so that the cost would be a very small amount for each member of the "silo association" as it might be termed.

In every community there is a threshing engine, for which arrangements in most cases could be readily made, and this power will serve splendidly for operating the cutting box. A group of five or six farmers could arrange to fill their silos co-operatively and with a crew ordinarily available from this number of farms one hundred tons of

silage could be cut daily, as it is quite an easy matter to cut up a ton every four to six minutes. It is of course unnecessary to rush the filling as rapidly as this, should it happen that a full crew is not readily available.

What Silo Program Can Accomplish

In conclusion I simply want to point out that this matter has been sufficiently tested to remove doubt as to its feasibility. We have at hand in Western Canada means by which the cost of production of dairy products can be reduced twenty to thirty per cent. Figures indicate that a reduction of twenty per cent. in the cost of producing dairy products in the three prairie provinces would mean a saving of over \$9,500,000.

The prairie provinces produced last year, dairy products to the value of \$6,000,000 dollars. The cost of production will constitute at least eighty-five per cent. of this figure which leaves a net profit of about eight and a half million. Therefore it becomes apparent that a twenty per cent. reduction in cost of production would more than double net returns or be better than the equivalent of doubling the production under the old methods.

In addition to this it will make dairy-ing possible in areas where before it has been considered a line of agriculture which could not possibly develop in such territories. Further, it will mean that among men who feel unable to continue operations under the trying conditions which they faced, will be given new hope and a further chance to make good.

Farmers Want Wheat Board

Continued from Page 27

Then, they make their large purchases, and wait for the market to advance later in the season in order to realize their profits. The odds are very much against the original seller, or producer, of wheat at the present time, and a continuation of this condition in the face of the unsettled and erratic demand overseas, will seriously impair the financial and commercial strength of the whole Dominion.

Benefit to Consumer

Regarded entirely from the point of view of the consumer of wheat or flour at home, the Wheat Board would be a benefit at this time. Here again, the report of Messrs. Stewart and Riddell may be quoted. They are on record, as follows:

The more evenly regulated movement would stabilize prices to the consumer, as well as in favor of the producer, inasmuch as whilst, when the big movement of the crop is in progress, prices to consumers are usually low, this relatively low price continues only for three or four months.

The price of flour to consumers bears a direct relationship to the prevailing price of wheat, but flour prices invariably do not follow day to day fluctuations in the wheat

market. Three-quarters of the farmers' wheat is marketed during a period of three months, at the beginning of the season, when the price of wheat usually is depressed. During the remaining nine months the tendency has always been for the price of wheat to ascend to higher levels, with the result that the producer only gets the benefit of the prevailing higher prices for the remaining quarter of his season's crop. The consumer, on the other hand, pays for his flour on the basis of current prices for wheat. Therefore, if as a rule the wheat market inclines to low levels during three months of the year, and to high levels during nine months of the year, because the bulk of the producers' wheat comes on the market in the shorter period, it would be to the advantage of the consumer, as well as the producer if the delivery of that wheat crop could be more evenly spread over the entire twelve months. If this could be done, fluctuations in prices would be lessened, and it is a well recognized fact that fluctuations in prices are detrimental either to the producer or consumer.

The inter-relation and community of interest between agriculture, commerce, and finance, is a fact that is appealing more generally to the people of this country. It is hardly necessary in Canada to argue that the interests of agriculture constitute the economic foundation of the country. Because of

The Grain Growers' Guide

that important fact, however, the agricultural interest is not a sectional or a class interest; and from this point of view we urge the government to reinstate the Canada Wheat Board.

First Number of U.F.A.

The first number of the U.F.A. "published by the United Farmers of Alberta," and bearing the date, March 1, has been issued. President H. W. Wood introduces the new publication in a front page editorial in which he gives its aims and purposes and some words of advice to its readers. "This paper," he says, "is a natural outgrowth of our organization. The organization is the soil in which it germinated. It is small; it could not be normal and be otherwise. Natural growth is from small beginnings. If the soil is right, and the cultivation right, the growth will be normal and vigorous. Our paper will grow and bear fruit just in accordance with the appreciation and support of the organization on the one hand and the practical management and editorial ideals on the other." The paper, he continues, is the property of the 37,000 subscribers. They "can make it just what they want it to be, but everyone will have a responsibility to meet and a duty to perform. . . . Everybody must have everybody else's help. Take an interest in it; make a study of it. Advise, criticize but don't knock. In other words co-operate constructively."

Hon. Irene Parlby writes interestingly on The New Legislature, seen through a Woman's Eyes, and makes feeling reference to the onerous duties of administrators. Under the title of Immediate Reduction of Freight Rates vital to Agriculture, J. R. Murray cites figures relating to the expenses and profits of the C.P.R. that will repay careful study. The first of a series of articles by H. W. Wood on The Significance of Democratic Group Organization should attract considerable attention because the subject is one of vital importance in modern political ideas and is now a factor in Canadian practical politics.

Some new ideas will be brought to the attention of the readers in the series which is begun under the title of The Causes of Depression in Agriculture and Industry, especially in connection with what has become known as the Douglas-New Age credit scheme. An interesting summary of the opening sessions of the Alberta legislature is given, together with matter relating to the U.F.A. The paper makes a good start with 20 pages, about the size recommended by the Board of Directors, namely, 11½ by 9 inches, and is to be published on the 1st and 15th of each month, under the editorship of W. Norman Smith, and the management of H. Higginbotham, from the offices of the United Farmers of Alberta, in Calgary.

Work for the Blind

A work in the cause of humanity, which is not as widely known as it should be, is that carried on by the Canadian National Institute for the Blind.

The Central Western division of the institute, covering the provinces of Manitoba and Saskatchewan, with headquarters in Winnipeg, has on its register 588 blind persons, of whom 41 are Indians. All of these are being assisted in some way. A number are being educated at the School for the Blind, at Brantford, Ontario, while others are employed in a broom factory at Winnipeg.

The organized farmers are connected with the work of the institute through a representative of the women's section of the Saskatchewan Grain Growers' Association, who serves on the advisory committee for Saskatchewan. The budget of the institute for this year calls for an expenditure of \$52,000. Of this it is expected that \$27,000 will be realized from grants by the Manitoba and Saskatchewan governments; the Manitoba Red Cross and the city of Winnipeg, and the balance is being raised by public subscription. Donations may be sent to the general manager, G. E. Peach, 52, Gertie Street, Winnipeg.

Altaswede Red Clover

Article III—Success attending the Introduction of this Hardy Legume makes Development of Alberta Seed Producing Industry reasonably certain—By Prof. G. H. Cutler

THE harvesting of leguminous hay crops such as Altaswede, alfalfa, or sweet clover, offers some difficulties which cannot be met by the type of haying machinery in general use in the West. The nutritive excellence of legumes resides principally in the leaves and if the crop is not cured and handled with special regard to salvaging the leaves, they become brittle, drop off, and the hay made therefrom is of inferior quality. Experience teaches that legumes should not be left as razeed by the mower till they are dried, the common practice with the grasses. For the preservation of color, uniform cure, and the retention of leaves, as much of the curing as possible should be undergone in the coil.

The accompanying illustration shows a mower attachment used by one of the largest growers of Altaswede. By this attachment the clover as cut is pushed back by the stubble to the curved ends of the pieces already described, and is coiled into a small roll. As it rolls up it moves sideways from the outer to the inner end, with the result that it passes off behind the

mower as one continuous windrow. Thus the clover is left in ideal condition for drying and curing. All parts of this attachment can be made by the local blacksmith, and when set up it can be operated by the driver.

There are bunching attachments on the market which are fastened to the cutter bar, but the results with them are not so satisfactory owing to the fact that the bunches are left directly behind the sickle, with the result that on the next round the team has to walk over them. Most bunching attachments require two men while the windrowing attachments already described requires only the driver, and it deposits the crop in the windrow which does not in any way interfere with the following round.

This year the crop at the University was cut with the grain binder. It was observed, however, that greater loss resulted than when the mower was used. In Ontario some growers of red clover seed use the Daisy reaper. This implement performs this operation quite as well and an attendant is not required.

Easiest Legume to Harvest

In contrast with sweet clover and alfalfa, Altaswede ripens its seed quite uniformly and may be cut with small loss from immature seeds. Even a few light frosts appear to affect little damage to the seeds when in the advanced stages of maturity. For maximum results cutting should take place when the seeds have reached the advanced dough or glazed stage, as at this stage slight loss from shattering occurs. Cutting may be deferred, depending on weather conditions, particularly wind storms, for two or three weeks. Some growers recommend cutting early in the day when the crop is tough, to avoid shattering of the heads. The crop is then put up in medium sized cocks for ten days or two weeks. The clover in this way has an opportunity to sweat and dry, and, in addition, there is no loss from high winds that often occur during the fall season and work havoc

when the clover is left in the windrow. If the crop is over ripe when cut and the stalks are dry and woody, it may be threshed almost immediately, out of the windrow. More satisfactory results can be secured, however, by coiling and even stacking before threshing.

When the crop is stacked it can be threshed any time during the fall or early winter. Some growers follow the practice of stacking as soon as the crop is dry and cover the stack with green feed to be threshed when convenient.

In hauling the clover to be stacked or threshed, a canvas should be spread on the bottom and sides of the rack to catch all shattered heads. This precaution will pay for the trouble many times as the dry clover heads are quite brittle and break readily by the tramping of the loader. Too much care cannot be exercised in handling clover for seed, as the heads bearing the seed pods break up very readily.

Threshing the Seed

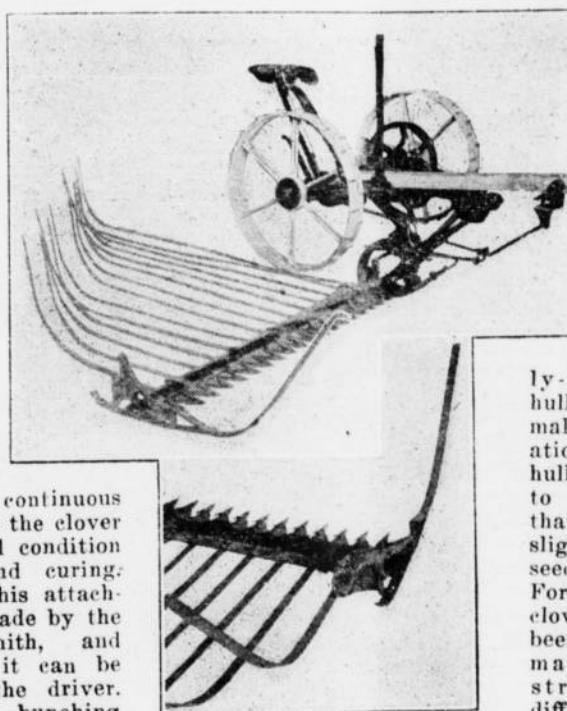
The seed of red clover is somewhat difficult to thresh as it is enclosed within a rather closely-fitting pod or hull. In order to make perfect separation of seed from hull, it is necessary to use something that will rub or slightly rasp the seed from the pod. For this purpose the clover huller has been devised. This machine is constructed quite differently from the grain thresher, although in outward appearance it looks similar.

The grain thresher is often used for purposes of hulling clover seed, but the results are not generally so satisfactory. To get best results one must pass the clover through the thresher at least twice and even then much good seed is unhusked. When the thresher is used it is necessary to close up all but about 12 inches of the feeding space of the machine, and as well place a board directly behind the cylinder. The board behind is placed in an upright position closing up all the space except about 12 inches at the end opposite the opening left in the feeder. Thus the clover is forced to pass along the full length of the cylinder before it can pass back into the machine. As it moves along it is vigorously rubbed and the seed is removed.

There are also several types of inexpensive hulling attachments on the market which may be attached to the ordinary grain thresher. Farmers who have used them report very satisfactory results.

Whereas threshing clover seed in a humid climate is attempted only during cold, snappy, wintry weather—in Alberta, largely due to a dry atmosphere, threshing can be carried out very successfully in favorable weather, any time during the fall or early winter months. It would seem that as the clover dries out, the hull loosens from the seed, and threshing or hulling is much facilitated.

The results in seed production with Altaswede are so encouraging as to leave no doubt about the development of a very large and profitable red clover seed industry in Western Canada. Every phase of seed production is aided



Mower with windrowing attachment for handling leguminous hay. As used on the farm of Wm. Chalmers, Edmonton South. Lower insert shows method of attaching to cutter-bar.

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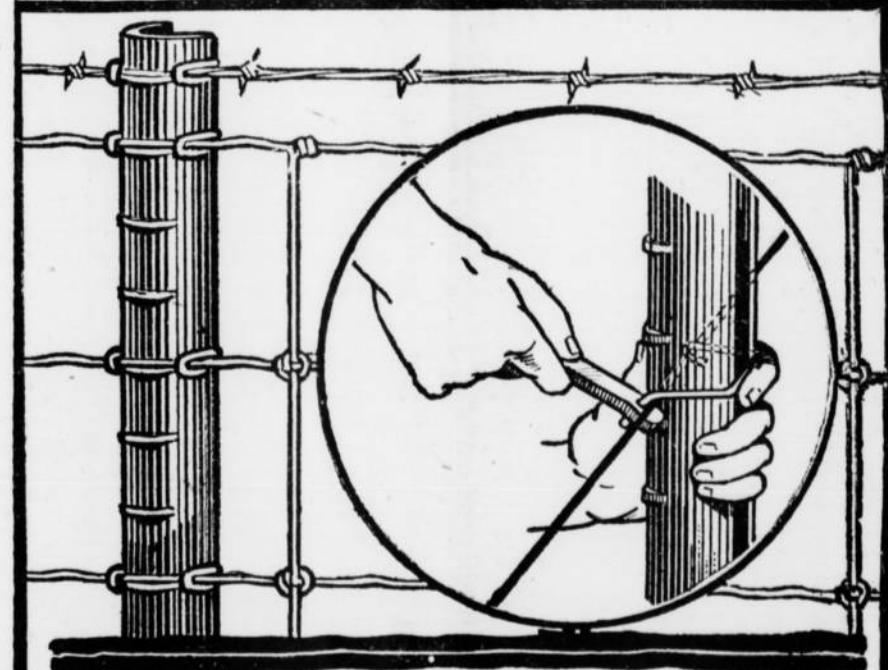
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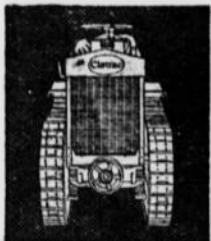
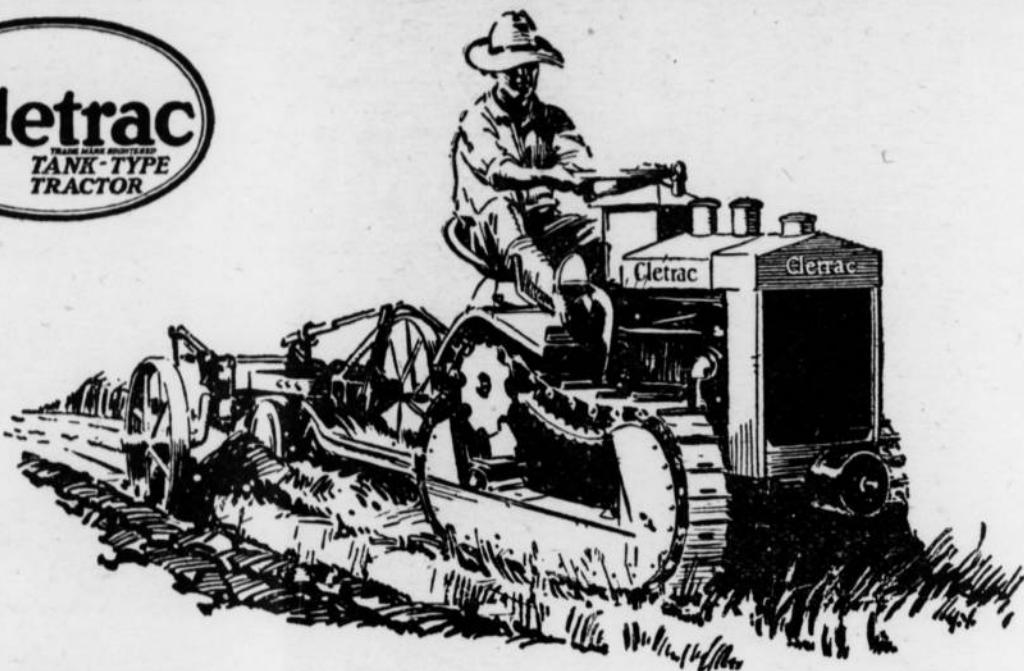
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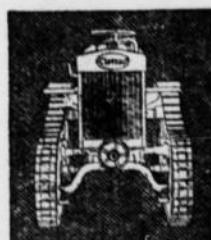
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The Grain Growers' Guide by favorable climatic conditions, pollination, seed formation, ripening, harvesting, curing, stacking, threshing, etc. The absence of insect pests and plant diseases is also a point of the greatest importance.

Where is Altaswede Adapted?

During the past four years Altaswede has been distributed to over five hundred farmers in the province of Alberta, through the Alberta Crop Improvement Association, for the purpose of testing its suitability to all conditions—non-irrigation as well as irrigation. In the majority of cases these have been garden tests, where Altaswede was grown in comparison with common red clover. In some 16 tests, widely separated in central and northern Alberta, one acre of land was used as the basis in each case, and in one test near the city of Edmonton, some four and a half acres were seeded. While it is too soon yet to pronounce definitely from these tests, it can be said with much certainty that except for the driest non-irrigated sections of the province, Altaswede possesses a remarkable suitability. The reports seem to show that where a good growth of the clover was secured the first season, it not only withstood winter freezing infinitely better than common red, but splendid growth was reported even under conditions where rainfall is less than fifteen inches annually.

Summary

Red clover is among the most highly nutritious forage plants, either in the green state or cured as hay. It is quite superior as a feed to sweet clover and compares very favorably with alfalfa. It is an especially valuable feed for cattle. Aside from its excellent feeding qualities its effect on the soil should not be overlooked. Most crops leave the soil poorer in plant food, especially nitrogen. Red clover, however, when inoculated, replenishes the soil of fertility.

Altaswede is used chiefly for hay. To obtain the best hay the crop should be cut when just past the full bloom. At this stage it possesses its highest feeding value. If cut earlier than this it is more difficult to cure and will not give quite as high quality or yield of hay.

The chaff and stems left when seed is threshed is much relished by horses, cattle and sheep. Its nutritive qualities are also good.

Altaswede produces an abundance of rich pasture, which is much liked by all classes of livestock. Care should be exercised, however, to avoid pasturing too closely. Cattle and sheep should not be pastured on red clover when the crop is very young or wet, as in this condition it is very apt to cause bloating. Unless the crop becomes very thick and rank, pasturing the year of seeding is not recommended.

It is generally conceded that red clover is a poor ensilage crop. This is chiefly because of its high nitrogen content. However, at the University, ensilage of excellent quality has been made from this clover. If used for ensilage purposes the crop should be cut a little earlier than when cut for hay. To ensure high quality ensilage, the clover should be well chopped and thoroughly packed in the silo.

Rotations are essential to successful and permanent crop production. To get the greatest benefit from a rotation a leguminous crop, such as red clover, must be introduced. By the use of red clover in a rotation not only is fibre added to the soil but the nitrogen supply is also maintained. Piper states that at the Minnesota Experiment Station it was found that, "the nitrogen content of the soil is preserved if red clover is grown two years in a five-year rotation."

The general adoption of a satisfactory legume will mark a new era in western husbandry.

Prof. Cutler Protests Editor, Guide:

I have noticed the two articles on Altaswede which have appeared in the columns of The Guide. In connection with the second article, in the issue of March 1, I would draw your attention to a point which I think should be corrected, namely the cut which illustrates the Altaswede. I think the



First season growth of Altaswede
This illustration has been reproduced on
account of Prof. Cutler's letter, printed in
this issue.

statement that this is a specimen of the Altaswede clover is entirely misleading, as the specimen shown is a picture of the plant as it behaves the first season only. The second season's growth is tall and upright, measuring from 36 to 39 inches. In view of the fact that you have omitted my description of the plant and its habits of growth the first and second year, I think it is the more important that you should correct this statement, as the average reader will get the impression from this picture that this is the general habit of the growth of Altaswede, and not the first year's growth only.

In my mind this peculiar habit of growth of Altaswede the first year is one of its chief assets, and is largely responsible for the fact that Altaswede does not winter kill like the common red clover, which has an upright growth the first year, even producing seed stalks, blossoms, etc.

I would be glad if you would correct this wrong impression that has been given, by stating that the specimen represents the first season's growth of Altaswede.—G. H. Cutler.

Native Corn and Drought Resistance

On the high-priced lands of the Western American states, where corn is the principal cash crop and where every acre must be made to yield the maximum amount of forage or seed, several distinct varieties suited to these ends have been developed. The growing tendency in Manitoba to sow corn on summerfallow to keep it from blowing is productive of a new standard for corn varieties suited to this field. Yield of forage is a secondary consideration, indeed a heavy yield means so much more moisture taken from the soil which tends to lessen the amount available for the small grain crop in the following year. Furthermore, few farms carry enough stock to utilize the roughage which large summerfallow would produce if sown to a variety noted for profuse growth. The prime qualifications become then, early maturity to allow of the best quality silage possible, and drought resistance. For these reasons some successful Manitoba farmers prefer Native Squaw corn to the Dent sorts. It enables them to cover a larger summerfallow area, in growing such a variety they are able to produce their own seed, they can profitably dispose of the crop, and their fields are in first-class condition for the ensuing crop of wheat.

Mr. Gordon McLaren, Pipestone, Man., has something of interest to say in this connection. He has been growing Squaw corn since 1889 and has carried on extensive trials with it since 1907. Moreover, he has fortified the practical knowledge gained in this way with a study of Indian legend. Here is his contribution:

"In the days of \$2.50 wheat I stated in The Guide that Native Indian corn was not a profitable crop to grow, but since that time drought, rust, saw-fly, grasshoppers, Russian thistle, and 80-cent wheat have changed my opinion. Native Indian corn is the most drought-resistant

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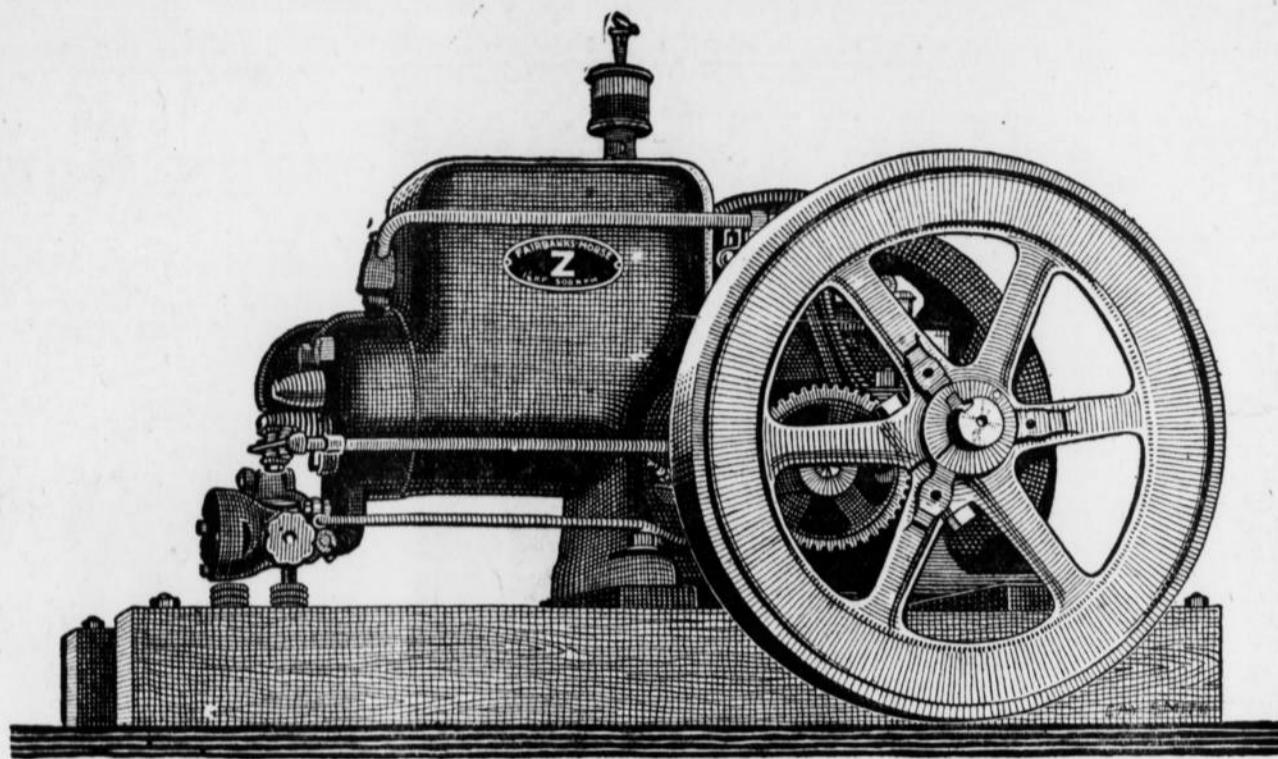
"Annual Pasture and Forage Crops for Manitoba" (16 pages)

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crop I know. It has been found by experiments in Dakota and Montana that it requires fewer pounds of soil water to produce a pound of dry matter than any other spring sown grain crop. Our experience bears this out. In 1910 on spring plowing Native corn yielded 22 bushels shelled corn per acre, wheat on fallow 13 bushels and barley on fall plowing 10 bushels.

"In 1921 we had the worst drought for 30 years in this section. On June 10 I sowed Assiniboine Yellow Flint on spring plowing, it was ripe September 1; in that time there was not enough rain in any one shower to lay the dust; it never seemed to suffer from the intense heat and drought.

"It is the most frost-resistant corn we have, as it survives spring and fall frosts that kill other varieties; in 1915 and 1917 with us it produced ripe corn with not over 70 days between the killing frosts in spring and fall.

"It can be sown after all other grains are seeded and make a crop. It is disease-proof; so far with us no disease has affected it. Outside of grasshoppers it is insect-proof.

Disadvantage—Low Yield

"We have had yields of 40 bushels per acre, but 20 is a safe average. Owing to its low habit of growth it is not a good fodder corn. The most objectionable point it has is bearing the ears close to the ground, so it cannot be cut with a corn or grain binder. We cut it by attaching a wing six inches in length to a sulky or walking plow share and driving the plow so the share wing cuts the corn stalks just above the ground, then the stalks are raked and bunched with the horse rake.

"We have found that yields can be increased by practicing thick planting—in rows three feet apart, kernels six inches apart, in hills two and a half to three feet apart, dropping five kernels per hill. It will do with less cultivation than any other variety of corn, but every stroke of the cultivator increases the yield.

Its Uses

"As a fallow substitute it can safely be sown for grain up to the first week in June; for fall and winter pasture until the first of July. It prevents soil drifting and holds snow in winter. In districts where winter rye kills when sown on bare fallow, it can be drilled among the standing corn stalks and they will hold enough snow to protect the rye.

"In the arid and semi-arid districts of the West barley is not a profitable crop, so farmers have no grain for fattening stock. Our experience is that you can grow two bushels of Native corn to one of barley; this corn can be used for fattening hogs and cattle. The crop handled in the way I have described can be fed to steers; we have tried it and found that the steers made rapid gains. In 1911-12 we wintered two brood sows on such feed.

"If the farmer does not wish to harvest the crop it can be hogged off or used for fall and early winter pasture for cattle and horses. We have tried it and it works admirably; this fall we pastured off ten acres after the snow fell.

"We believe that these native varieties of corn should occupy a place in the dry-land farmers' rotation; they will not grow without moisture, but will ripen grain with less rain than any crop we have ever grown.

"There are several varieties of Squaw corn, and several varieties of Improved Squaw corn; we prefer to call them Native corn.

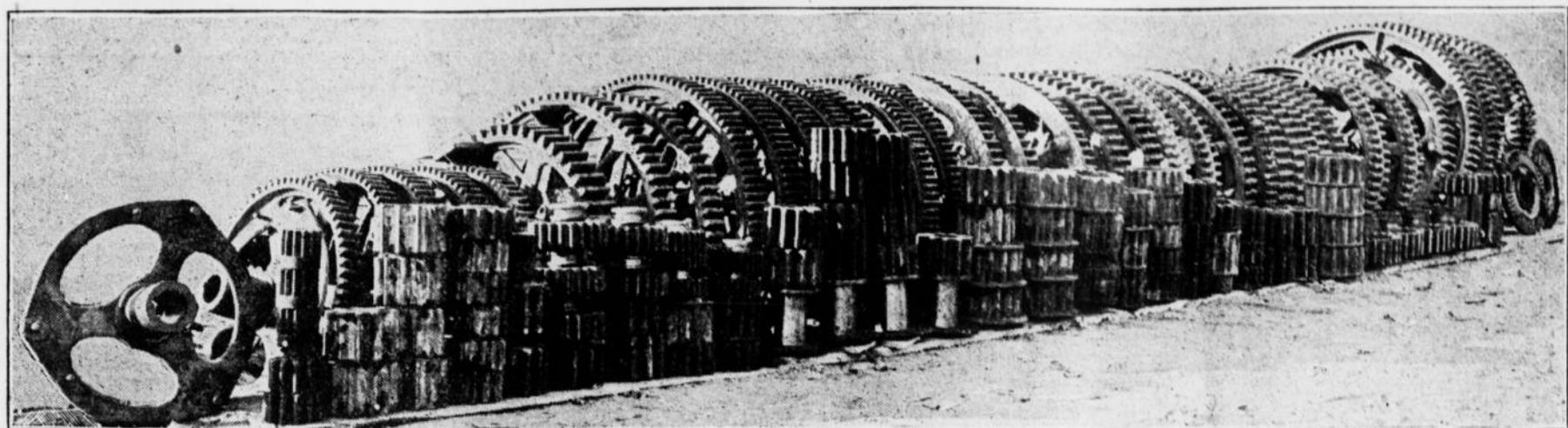
"Why go to Siberia to import drought-resistant crops and neglect the only grain crop native to the great plains, except the Indian varieties of beans? This corn has been grown under dry-farming conditions for hundreds of years."

Where Does Rust Come From?

There are few subjects to which farmers will more willingly listen than the question of rust, and few agricultural speakers who can present scientific subjects in a more engaging manner than Prof. V. W. Jackson, of the Manitoba Agricultural College. And so this combination was one of the features at the 1922 Manitoba Agricultural Societies' convention.

From where does rust infection come? In dealing with this question Prof. Jackson spoke of the tremendous sums of money spent in the American spring wheat states to eradicate the barberry plant, which, apart from the wheat plant itself, is one of the principal carriers of rust.

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spores. The barberry is being exterminated root and branch and another year or two should witness its virtual extinction in the Central American West. Harmful as the barberry may be in propagating this wheat crop scourge, it is not sufficient to explain rust epidemics in Canada, for barberry does not grow wild in our rigorous climate. It has never been grown to any extent by Manitoba horticulturists. The last few specimens to survive the campaign for eradication were some in Elmwood cemetery, but objections were finally overcome and the plants destroyed in 1921.

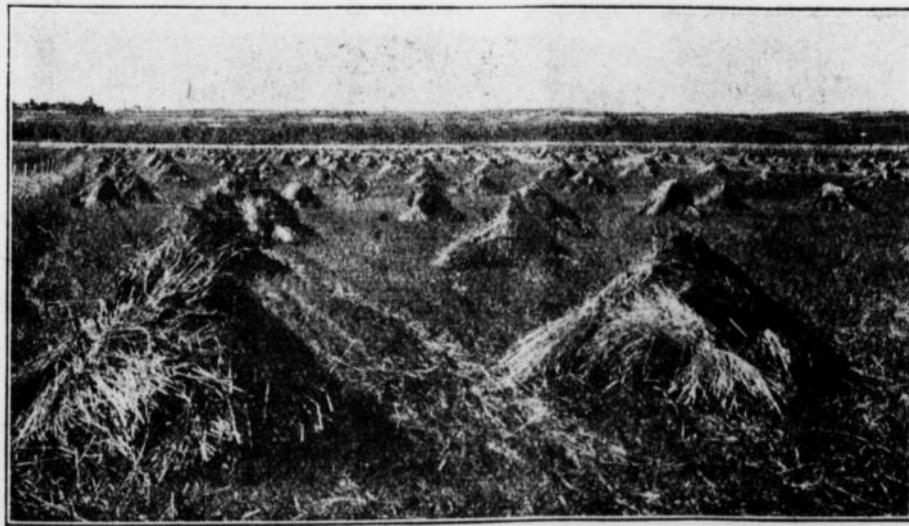
Prof. Jackson stated that there were other hosts besides the barberry that served as a winter host for rust spores. "Go out on the car line," said he, "and kick aside the snow and you will find some wild barley, or skunk grass, often called foxtail, and you will be able to find fresh red rust spores in the shot blade."

But there is a suspicion among biologists that the revisitations of rust such as we have had almost continuously since 1916 in some parts of the West, cannot be explained on the theory that spores live over winter on some alternate host. There is considerable evidence to sustain the belief that fresh infection is borne up every year by winds from the south. It has been observed that the trouble makes its first appearance annually in the winter wheat region of Missouri and Kansas. Two weeks later Dakota is in the grip of an epidemic. Two weeks after that Southern Manitoba and Saskatchewan suffer damage, and the degree of injury becomes less marked as it progresses northward from these areas, for by this time the season is so advanced that the crop is past the stage when rust affects the quality and yield of grain.

If this theory becomes generally accepted it would seem that a farmer's best protection against rust, until some resistant variety has been evolved, is to sow early in the hope that the crop is too advanced to be materially affected when the wave arrives.

Resistant Varieties

Discussing the plant breeding work aimed at the production of a rust-resistant variety, Prof. Jackson explained that the basis of most of the work to date had been along the line of combining the resistance of Einkorn varieties with the yield and quality of bread varieties, such as Marquis. Einkorn, he it understood, is that class of wheat in which there is one grain only in each spikelet or chaff envelope, those wheats with two grains in each spikelet are known as emmers, and those with three are the common wheats. Einkorn is the only rust-resistant wheat, but its general culture would be out of the question on account of its low yield and inferior milling quality. To date most of the Einkorn common wheat crosses had been infertile. Like the well-known hybrid of the horse and donkey, they do not perpetuate the cross, hence selection is limited to a comparatively few of the crosses. It has proved no easy matter to get one fertile cross which preserves in a fair degree the qualities of our best varieties and at the same time introduces the desirable characteristic of rust resistance from the European parent. Without denying the special value of durum in some localities, Prof. Jackson rather disparaged the idea that durum would afford the ultimate solution of the rust problem. Durum wheats are after all only relatively rust resistant and fall below the standard of common varieties in several important respects.



Heavier wheat crops—the reason why The Guide advocates growing silage crops. This is a wheat field on the Brandon Experimental Farm sown after corn. Such fields have yielded uniformly more than wheat on summerfallow.

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Spring Is Here

Now come the Pigs—the Calves—the Colts—and the Lambs.

TIME for your work horses and mules to shed their winter's coat.

—TIME to tone them up—give their systems a spring house-cleaning—and drive out the worms.

Dr. Hess Stock Tonic

A Spring Conditioner and Worm Expeller

Your COWS that have long been on winter feed need the system-toning, bowel-cleansing, appetizing effects of Dr. Hess Stock Tonic. Puts them in fine condition for calving. It means more milk.

Your BROOD SOWS will be relieved of constipation and put in fine fettle for farrowing by a course of Dr. Hess Stock Tonic,—which means healthy pigs, and a mother with an ample milk supply to nourish them.

Your SHOATS will be greatly benefited by a course of Dr. Hess Stock Tonic. It drives out the worms—stimulates the appetite and makes them thrive.

Feed it to EWES before lambing time. It prevents fevered udders and scouring lambs. Feed it after lambing time to stimulate the flow of milk, insuring lambs for the early market.

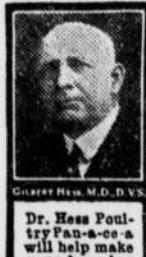
Dr. Hess Stock Tonic contains Tonics for the digestion, Laxatives for the bowels, Diuretics for the kidneys, and Vermifuges for the worms.

Always buy it according to the size of your herd. Tell your dealer how many animals you have. He has a pack-age to suit. Good results guaranteed.

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Smaller packages in proportion.

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will help make
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now.

Dr. Hess Instant Louse Killer Kills Lice

Edmonton Spring Livestock Show and Bull Sale

April 10-15, 1922

Bull Sale entries close March 10th; all other entries, including children's feeding competitions, fat stock classes, and horse classes, close March 27th.

PRIZE LIST NOW OUT—WRITE FOR SAME

CORRECTION

In addition to the car lots for fat steers, and instead of the two special classes for five fat steers as originally announced, the Federal Department of Agriculture will offer prizes for three classes of five fat steers, as follows: (a) 1,200 lbs. or over; (b) 1,000 to 1,200 lbs.; (c) under 1,000 lbs.

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Lee Poultry Supplies. Write for information and FREE Book.
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These Saskatchewan Belgians won eight prizes at the 1921 International, and 14 prizes, including both grand championships, at the Guelph winter fair.

Canadian Breeders Foregather

Perennial Question of obtaining Adequate Representation for West up again at Toronto Annual Meeting—Some Important Concessions Granted—

By An Easterner

LIVESTOCK week in Toronto is much more than a local or eastern affair. It has become an event of great national importance to the livestock industry of Canada. There was a time, however, and it is not so very many years ago either, when the annual gatherings of the national livestock organizations were purely eastern in their viewpoint and in the work planned for the advancement of the pure-bred livestock interests. Probably some venturesome westerner on a visit to the East would interject a word or two at some livestock meeting about the West and the possibilities of livestock development in the prairie provinces. He would be given the courtesy of an attentive hearing and the meeting would pass on to the discussion of other business.

Up to ten or a dozen years ago that was largely the situation at the annual meetings of the livestock record associations. The little "leaven" interjected into the proceedings of earlier gatherings began to have its influence. Visitors from the West became more numerous, and as they never failed to put in a word or two for the West as occasion arose, eastern stockmen began to take notice. At first recognition of the West in the official conduct of the associations was purely honorary—a vice-presidency here and another one there. For the time being these more or less honorary distinctions were accepted with due courtesy by our western friends. It was with them the "thin edge of the wedge" that would open up the way to more definite recognition of the claims of the West to adequate representation in managing the affairs of organizations, national in scope, and affecting the livestock interests of all Canada.

Eastern Attitude Changes.

And such it has proved to be. About a decade ago the movement began for representation on the boards of directors of the national livestock associations according to membership. By this time membership in these associations from the West had grown to comparatively large proportions. Western delegates were able therefore to put up a strong case. It was not an easy task by any means. The full control of the associations had been so long held in the East as to become a fixture in the minds of many eastern stockmen. These looked upon the westerner as a "kicker," as an individual who came East as a "trouble-maker" and a disrupter of the established order of things and whose claims were received sometimes with scant courtesy by the rank and file of eastern stockmen. By persistent effort and claiming only what was justly due the West, because of rapid development in livestock husbandry and increased receipts from membership and registration fees to the record association, the movement could not be stayed. Moreover, not a few of the broader-minded men in the East began to champion the claims of the West, resulting in a general movement all along the line, which has placed the western provinces on an equitable basis according to membership so far as representation on the boards of directors on the various organizations is concerned.

And this can be said to the credit of the western men who have so persistently and effectively presented the claims of

the West for adequate representation in carrying on the business of the record associations. They never asked that the executive offices be changed or that the West should be represented on the executive committees, which carry on the business of the associations during the intervals between the annual meetings. Although one or two of the more wealthy organizations in recent years have had their president in the West, and, therefore, by virtue of his office on the executive committee our western friends have the good sense to realize that it would be a needless expense to claim representation on executive committees. If the executive offices are to be kept East, then the executive committees must remain East and within such distance that the expense of conducting the business may be reduced to the minimum. As the writer sees it, the desire of the West up to the present, at least, is to have the main business and policy of the organization discussed and decided upon by the annual meeting and the board of directors, leaving to the executive committees to carry out the decisions of the boards and the smaller details in carrying on the work. That is, I think, the practice in most of the associations, and so long as it continues and the West feels it has its full say in planning the work of the associations and in controlling expenditures, there will be no further disturbance of present conditions, all of which will be in the best interest of the industry which these associations represent.

In fairness to eastern stockmen it should be stated that of late years, at any rate, they have shown every desire to give the West its share of the receipts in the way of grants to exhibitions, etc. This is true, I think, of most of the larger organizations and the western representatives are the first to acknowledge it. In some of the associations a definite plan by which surplus funds are distributed according to the amounts paid in members' fees and registration fees from the various provinces has not been worked out, though, generally speaking, distribution of funds to the various provinces by way of grants to fairs is on a basis of receipts. There must always be some give and take in this respect. There are some provinces where, if grants were based on receipts, the exhibition in those provinces would receive nothing, as receipts are more than taken up by expenses of representation on the board of directors. A certain share of the funds, therefore, must be set aside for missionary purposes and for furthering the interest of the breeds represented in places where good possibilities of advancement are in sight.

The 1922 Meetings

This brings us to the February meetings of this year. They were, for the most part, not as largely attended as a year ago, though the representation so far as the provinces outside of Ontario is concerned was pretty general. Ontario is depended upon to supply the crowd, and as agricultural conditions have been depressed here as in the West, the attendance fell off somewhat.

One of the new features discussed, more particularly at the Shorthorn and Clydesdale gatherings, was a change in the constitution allowing the annual meeting to be held outside of Ontario, which means in the West if the occasion

warranted it. The constitution of both these associations stipulated that the annual meeting must be held in Toronto. The western representatives made a strong plea for the holding of the annual meeting occasionally in the West. While the proposal had not a few sympathizers in the East, it was felt that it would be impracticable to hold the annual meeting of one or two associations in the West unless all of the associations or the majority of them held theirs West also. In other words, unless there was a movement to transfer "livestock meets" from Toronto to Winnipeg or some other Western point, it would not be wise for one association to do so alone. The final outcome was the passing of a resolution changing the constitution as to place of meeting, removing restriction regarding it and allowing the executive committee to arrange for the annual meeting to be held outside of Toronto or Ontario if deemed advisable.

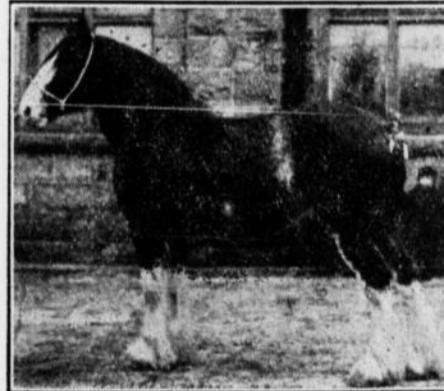
There is no doubt about it, eastern livestock men would receive a royal welcome if the meetings were held occasionally in the West, and there is little doubt also that such gatherings would aid greatly in promoting the livestock interests of the West. But until such time as the financial position of some of the associations is stronger than it is at the present time and the railways come down to a reasonable basis regarding passenger rates or special rates attending these annual gatherings, our western friends should not bank too strongly upon a "livestock meet" west of the great lakes.

Grants to Fairs.

One of the questions discussed at the Shorthorn meeting was that of making grants to the smaller fairs and exhibitions. Representatives from a certain local fair in Ontario made a strong plea for assistance. The difficulty here lies in where to draw the line. None of the record associations, to say nothing of the Shorthorn Association, which is the wealthiest of the lot, have sufficient funds to take care of all the local fairs in the country that would apply for grants. The opinion expressed was that unless a fair had something special in the way of a boys' and girls' calf club to offer no consideration could be given the matter of grants to local fairs.

Change in Clydesdale Directorate.

The Clydesdale Association was the first of the larger organizations to consider the claims of the West for more say in conducting its business. By means of vice-presidents for the various provinces, who are members of the board of directors



Dounre Lodge White Heather
From the stable of Mrs. R. H. Bryce,
Arcola, Sask. A Chicago prize-winner.

and who have their expenses paid to the annual meeting, outside districts for several years have been well represented. It was, however, not representation according to membership. At the February meeting this year a change was made and representation arranged according to membership. Hereafter representation on the board of directors will be as follows: British Columbia and Alberta, two; Saskatchewan, three; Manitoba, two; Ontario, five; Quebec, one; and the maritime provinces, one. This, in addition to a president and vice-president elected at the annual meeting, will give a board of 16. The Ontario directors will be elected at the annual meeting by the Ontario members present and voting, excepting in case the annual meeting should go West, when they will be elected by ballot by mail, as is provided for the election of directors outside of Ontario. As showing the change that has come over the East in regard to the West, this

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Every Stockholm Cream Separator is sent on 30 days FREE TRIAL. Sold direct to you. No money down. No deposit. No obligation to buy. Examine the workmanship, material and construction. Satisfy yourself that it is the cleanest skimmer. Examine the BLADE-DISC BOWL, the very small number of parts and see how easy it is to keep them clean. Then take advantage of our exceptional offer. Small first payment after free trial and the balance in easy monthly payments. Find out about this great offer. Send the coupon below.

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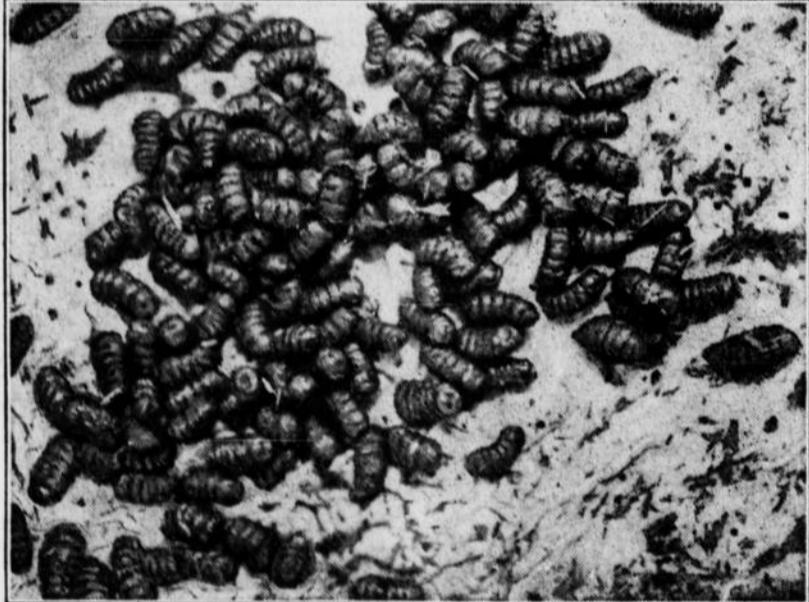
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SALE, April 5, 6 and 7, in following order: Herefords, Shorthorns, Angus, Galloways. Entries closed. Write for catalogue.
HORSE SHOW ENTRIES CLOSE MARCH 18
Greatest Jumping Exhibitions Ever Staged in Western Canada.
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REDUCED RATES ON RAILWAYS FROM ALBERTA POINTS



Do You Know What These Are?

They are a typical group of the larvae of the **BOT-FLY**, the most insidious and widespread parasite that affects horseflesh, photographed just as they were found upon post mortem, in the intestinal lining of an otherwise healthy two-year-old colt. Horses' stomachs frequently are literally lined with them. Horses infected in the summer carry these bots within themselves all winter, to break loose after nine months and be hatched in the spring.

From 80 to 90 per cent. of farm horses are more or less infected with them. They break down a horse's energy, sap his spirit and strength, impair digestion, destroy the value of the food he eats. As long as there are flies, you're going to have **BOTS**. You can't see them, but if your horse lacks pep, eats without gaining and has a dull eye, it's a safe bet they're there—thousands of 'em!

"A Sur-Shot" Never Fails

The one tried, sure, specific Knock-out Drop that gets the Bots with one application—and doesn't hurt the horse. Our patented instrument makes application of the capsules positive, easy and fool-proof. Used by thousands, endorsed by leading breeders. \$3.00 package includes instrument and doses for four large or six small horses. Double quantity, \$5.00. Use it twice a year and your horses are always clear. One dose saves many dollars in feed alone.

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change carried at the annual meeting with only one or two dissenting votes.

Ask for Promotion Work.

An important recommendation at the Clydesdale meeting was that asking the Hon. Mr. Motherwell, minister of agriculture for Canada, to provide for the same kind of propaganda work in promoting horse breeding through the Livestock Branch as is now practiced in the cattle, sheep, swine and poultry divisions. At present, while there are a number of men engaged in furthering the other branches of livestock, only one man is devoting his time to the horse interest. It was felt that the time was opportune for an aggressive movement in the interest of horse breeding, not only in the West, but also in the East. The directors' report showed that there was a shortage of 140,000, as compared with five years ago, in the number of colts and fillies in the country under two years of age. As breeding has fallen off considerably during 1921, conditions point to a big shortage in the supply of good horses in the very near future.

On the day following the meeting several of the directors discussed this question with Mr. Motherwell, who was in Toronto. He promised the fullest consideration of the matter.

News for Hereford Men

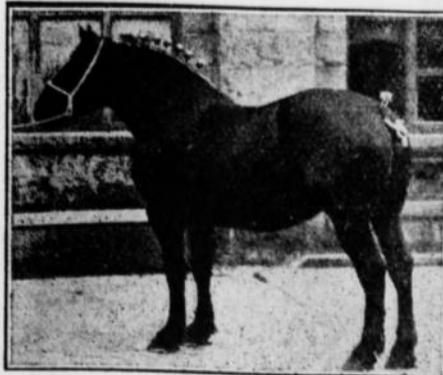
Hereford breeders in the West will be interested in knowing that the reciprocal arrangements as to registration as between the Canadian and American associations decided upon last summer, and about which some misunderstanding occurred in the interval, have been satisfactorily adjusted. A couple of days before the annual meeting the president, L. O. Clifford, M.P., and J. W. Brant, accountant, National Record Office, had a conference with the officials of the American association and were able to announce a completely satisfactory arrangement in the matter.

Successful Steer Feeder

While many farmers are sitting back criticizing the present conditions of the cattle market, and allowing their cattle just to pick up a living of any kind in the open this winter, the assurance that some far-sighted farmers are making real money out of finishing cattle for spring markets is at least cheerful news.

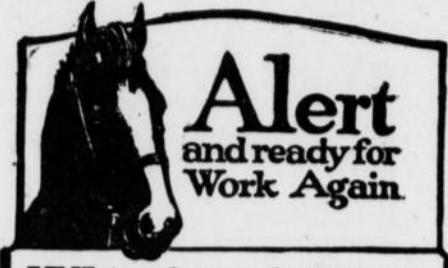
On the depressed cattle markets of last October, Mr. Thos. Morrison, of Argyle, Man., was one man who believed that the bottom in cattle prices had been reached. He came on the Winnipeg market on October 1, and selected 15 head of choice feeder steers. These were taken out and allowed to run on stubble until about November 12. About half the steers were dehorned and the balance were dehorned on arrival at Mr. Morrison's farm. Those that he dehorned naturally went back noticeably, and considerable gain was lost in this way.

About the middle of November the steers were taken indoors and put on feed in a roomy pen, none of them being tied up. Mr. Morrison had considerable feed on the farm that was unsaleable last fall, and he endeavored to convert this into beef to the best possible advantage. These steers were put on a ration of mixed oat and low-grade barley chop and oat straw. The oat chop was later displaced by chopped wheat screenings, together with the low-grade barley chop. The oat straw used was clean and bright, but all straw fed was liberally sprinkled with salty water. This liberal use of salty water on hay or straw fed to fattening cattle is an old practice of Mr. Morrison's,



Black Lorraine

Now owned by the University of Saskatchewan. First prize four-year-old at the 1921 International and Guelph grand champion.



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is sold under signed **MONEY-BACK GUARANTEE** to absolutely cure Ringbone, Thoropin, SPAVIN or Shoulder, Knee, Ankle, Hoof or Tendon Disease. Over 28 years success with stubborn cases where everything else failed has proven the value of **SAVE-THE-HORSE** to more than 325,000 satisfied users.

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Blackleg Vaccine (Blacklegoids)

The reliable blackleg vaccine
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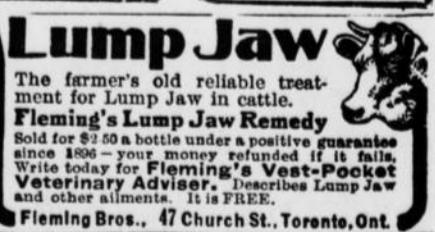
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An aggressin made from cultures.

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DOG DISEASES

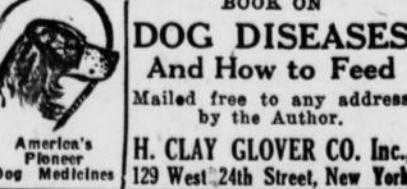
And How to Feed

Mailed free to any address

by the Author.

H. CLAY GLOVER CO. Inc.

129 West 24th Street, New York



and one in which he has great faith as a conditioner and appetizer. The cattle were turned out each day in the yard for water, and abundance of straw was kept under them at all times. Being Scotch, Mr. Morrison lays great stress upon the value of farm manure for the average Manitoba farm. He cleaned out the box stalls after these cattle once a month and hauled the manure direct to the field into piles, dozen loads each, which will be spread thinly where needed in the spring.

The profit on this investment may be arrived at from the following statement of purchase and selling price:
Cost of 15 steers, average 1,050
lbs., 15,750 lbs. at \$4.15 per
hundred \$ 653.60
Sale of 15 steers, averaging
1,250 lbs., 18,750 lbs., at
6.75 per hundred 1,264.60
Gross profit \$ 611.00

When taken out on October 1, these steers averaged 1,050 pounds each and cost 4.15 cents per pound. This was an average cost of \$43.60 per head, or a total investment for 15 head of \$653.60. When they were weighed at the stockyards on March 2, they averaged 1,250 pounds, and sold for 6.75 cents per pound. This is an average selling price of \$74.40 per head, or a total selling price of \$1,264.60. The gross profit was \$611, or an average profit of \$40 per head.

Mr. Morrison was particularly well pleased with the success of this feeding experiment. He had none of the expense connected with growing and storing silage or roots, and the feeds used were of little commercial value. He made an average gain of 200 pounds per steer in five months, and received an advance in price of over 2.5¢ per pound. The only deductions Mr. Morrison would consider as expenses were the items of freight to and from market (35 miles), and interest on the money invested. He believed the manure paid all expenses of labor engaged in caring for the steers. In the face of heavy losses which many farmers have suffered in buying and re-selling cattle on falling markets, Mr. Morrison's experience is of interest. The secret of his success may be summed up in the fact that he bought in the fall, the low point of the year, and resold in the spring on an advancing market. He selected good quality steers and did not allow a few dollars to stand between him and the type of steers that respond to good feed. He finished these steers properly on cheap feed, and sold at the top of the market on March 2, a combination of circumstances which make for success in steer feeding.

Not only in steer feeding is Mr. Morrison scoring unique success. He has been devoting much attention to the production of choice seed grain. He has specialized in Improved New Ruby Wheat of which he has been growing a considerable quantity on a commercial basis for seed purposes. Mr. Morrison has found this variety particularly suitable to present conditions in Manitoba. While not claiming it is a better variety than Marquis, it is earlier in maturing, and in Mr. Morrison's opinion is to be recommended as a rust resistant variety. As it matures earlier than Marquis it escapes the effects of rust more successfully.

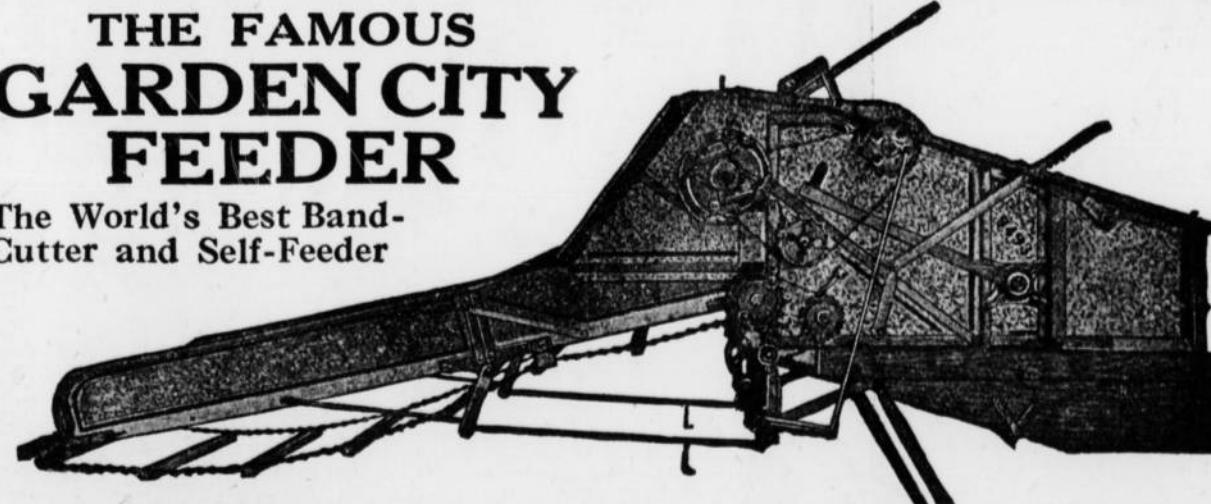
The Test of Time

Very often we are—any of us—inclined in the first flush of success to give the scheme or operation, or whatever it may be, our enthusiastic endorsement, and we may be right at that, in the majority of cases. But the opinion that carries weight—that convinces you beyond all doubt—is the one that is formed from a number of repeated experiences that may extend over years. Take for instance—you would place every confidence in the opinion of Charles Lintott, Raymore, Sask., when he says:

"Kindly stop my ad. for improved Marquis seed, as I am already entirely sold out. May I add my testimony to that of your many other satisfied advertisers regarding the special results obtained through your classified columns. It is now several years since I first tried your paper with one insertion, but results have been so good that this year I depended entirely upon you to dispose of my entire supply."

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The World's Best Band-Cutter and Self-Feeder



Because it will make your Old Separator do more and better work, saving grain, time and money. We have proved it thousands of times. Will you let us prove it to you? Send for free catalog.

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"My trouble began with a roughening of the skin and itching scalp. Later hard, red pimples broke out on my face and completely covered it. Some of the pimples festered and itched badly at times. I began using Cuticura Soap and Ointment and after a few days my face felt better. I continued using them and in three weeks was completely healed, after using one cake of Cuticura Soap and one box of Cuticura Ointment." (Signed) Leslie Gray, 10 Chestnut St., Plymouth, Mass., Feb. 28, 1921.

Cuticura Soap, Ointment and Talcum promote and maintain skin purity, skin comfort and skin health. The Soap to cleanse and purify, the Ointment to soothe and heal, the Talcum to powder and perfume.

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THE GRAIN GROWERS' GUIDE
WINNIPEG, MAN.



Admitted to the House of Lords

WOMEN may now sit in the House of Lords. This right has been established through the favorable decision of the Committee on Special Privileges from the House of Lords, headed by Lord Droughmore, on the petition of Viscountess Rhondda. With the granting of that right to Lady Rhondda, twenty-four other women who are peeresses in their own right may claim the right for a writ of summons, this number including—one duchess, four countesses, two viscountesses and seventeen baronesses.

Lady Rhondda is a daughter of the late Viscount Rhondda, Great Britain's food controller during the latter years of the war. Viscount Rhondda died in 1918, through illness brought on by overwork. Lady Rhondda, as the only child, succeeded to the title and large business interests of her father. Lord Rhondda was long known as the "coal king" in the direction of numerous large businesses, and now frequently his daughter is alluded to as the "coal queen." Lady Rhondda was recently listed as member of the directorates of 36 companies and chairman of several boards. She was very active in industrial activities during the war, and in 1918 was chief controller of the women's recruiting service. During the pre-war days, in the fight for the ballot, she was a militant suffragist.

The petition presented by Lady Rhondda based the claim of the right to receive the writ of summons on the Removal of Sex Disqualifications Act of 1919, whereby it was provided that a person should not be disqualified by sex or marriage from the exercise of any public function, or from being appointed to or holding any civil or judicial office or post.

The counsel in arguing for Lady Rhondda stated that this act had been passed for the express purpose of abolishing sex disqualifications, whatsoever that had existed, that the exception to women sitting in the House of Lords could not be taken from the general provisions of the act. There was no trace of any such exception on the face of the act, and no such exception should be introduced. Women are now admitted to the House of Commons and there was no reason therefore why they should not be admitted to the House of Lords.

How a Trademark Protects

Before the invention of power looms and the introduction of commercial canning, the house-mother made everything the family wore, and prepared all the food they ate. Since then times have changed. The woman of today may not have the same skill as her foremother along certain lines, but she is none the less an important factor in the economic life of the country. Now that so many things are manufactured outside of the home she, of necessity, has become an intelligent buyer.

When discharging her responsibilities as chief spender of the family income, the wise homemaker utilizes the protection afforded by trademarks. In buying an article of clothing which is stamped with a trademark she knows the name of the firm who made it. More than that, with the address of the firm at hand, she can secure information about the conditions under which the product was manufactured. Many of the most reliable concerns which turn out stamped goods furnish guarantees offering to replace any article which does not give the wear that they claim for it.

A trademark saves time in purchasing, for it establishes definite standards which are of great assistance to a woman. Through it is eliminated the task of deciding between various qualities of gloves, or stockings, or corn, or tomatoes, or salmon, which have no distinguishing marks, no guarantee of quality, no one standing back of them, and no way of tracing the place where they were made.

Not only does a trademark guide a homemaker to the best goods, but it helps her to avoid the poorer qualities. If she finds that a certain brand of corn contains more water than vegetable, she will naturally refuse to buy it in the future. Without trademarks a purchaser would have no means of distinguishing between good values and poor ones.

The Child and a Clean Plate

It is really hard to know what we ought to do when children want to leave something on their plates. In the first place, we want to teach them



A nature study lesson

politeness and cleanliness. It does not seem polite to leave things. When on a visit, above all, it is as much as to say: "I do not like what you give me to eat in this house." It certainly does not look clean, to leave cold potatoes and greasy gravy on a plate!

Once I tried giving a child a small—a very small helping at a time and she said: "Do you think that I'm a sparrow?" This shows I must have exaggerated. We are often inclined to exaggerate when we are over anxious to do the right thing.

A child must be treated something like an animal after all, especially when tending to its physical needs. But there are many cases where a child does not seem to have the sense of an animal. When you give your dog too much, he will generally hide what he does not need at present, whereas, a child, if it likes the dish you put before it, will try to stuff it down, even though "there is no room left."

We are careful to train our children to habits of cleanliness. We make them wash their hands and faces before a meal, and their teeth afterwards. Yet I have been in houses where all this was done, but, once at table, the children were little better than savages. Did they leave all their good manners at school or in the playroom?

A child should be allowed to have its meals with its parents as soon as it can sit up in a chair. At least, this should be done for breakfast and dinner. We must not keep them up late for supper. If our children have two meals everyday with us, they will do as we do, even unconsciously. Children are like this. You are mothers; yet I wonder if all of you have noticed that when children leave untidy plates, they are only imitating you!

Try to realize how much a child really ought to have. It will be different for each child, and must vary according to age and strength. It is not nice to pile up plates. It takes away one's appetite. Better return for a second or even third helping. As soon as a child is old enough to understand its own appetite, it should be allowed to help itself. Of course, we must train it well first. From six years of age, I think most sensible children might help themselves. The mother can give a warning now and then, such as: "Now do not take more than you can really eat."

Try not to bring in the second course until the child has finished its

first. I have seen a child stop suddenly and say it did not want any more, just because the sight of the second course was too much for it. The child may know there is something else coming, but this knowledge does not have the same bad effect as the sight of the other dish. Imagine a child finishing its meat and potatoes, when its favorite colored jelly is brought in.

While we want to train a child to eat everything on its plate, there are times when such a thing would be harmful. We must use our own judgment in this. If the child gets up in the morning seedy and tired, it is best not to make it eat, against its natural inclinations. A child has its own instincts and should not be forced to eat. But, by a little foresight on our part, we should give it so small a portion on these occasions, from the start, that we could easily see if the child wanted to leave things because it was sickly or purely from greediness.

We must also be careful not to judge of a child's appetite by our own. Perhaps we have worked hard cleaning down the house, washing and all that, so naturally we come to the meal hungry. Or it may be we have only worked our brains and so do not require as much food as usual that day. Age counts a great deal too. And climate also, and the time of the year. Oh, there are a great many things we must consider: In winter we need more food than in summer. One day my little girl took a brisk walk, and it was very cold. She was only eight then, but she had been taught about food values. On the way home she said, "What a lot of calories we must be using up!" We both of us needed a hearty meal on our return, and she did not leave anything on her plate.

If you have a maid, or a cook, or a hired girl, or whatever you call her, in the kitchen, do not allow her to do her own ordering. You owe it to your family to choose what they are to eat. If you do not understand food values, there are plenty of schools or even books where you can learn. The days are past when "just anything" was put before the children. Long ago, they ate up the scraps, all the puddings and everything "left over." No wonder they left things on their plates. Children did not seem of much importance then. "O give it to the children," was a frequent remark when people did not know what to do with a dish. "It's only for the children's table," I have heard a cook say, even in my day.

If children are not the most important people in the world, I wonder who are? If we were to give them their right place in the house and put the choosing of their meals as one of our first duties, as indeed it should be, we'd see that we had healthy, well-mannered children, and, consequently, better behaviour at table and cleaner plates.—By Mrs. Nestor Noel.

Our Contest

We wish to particularly draw the attention of our women readers to the contest announced in our last Household Number, The Guide for March 8. We have offered \$30 in prizes for the best letter from farm women on the following subject, Do You Want Your Daughter to Marry a Farmer?

A full description of the contest and the rules governing it will be found in that issue. Read the announcement again and write us a letter on that subject. The letters must not exceed 600 words in length, and must be in our office not later than April 25. All letters in the contest should be addressed, Editor, Women's Department, The Grain Growers' Guide, Winnipeg, Man.

A very handy utensil is one of the longhandled spoons such as are used for ice cream sodas. I find it excellent for removing fruit from sealers, pickles from bottles and food from tin cans. When using it the material is emptied more rapidly and there is less danger of cutting hands on jagged edges.—Mrs. J. D.

The Countrywoman

Provincial Association Notes

Saskatchewan AN APPRECIATION

The following letter written by Wm. Rowles, a member of the Mayfield local of the Saskatchewan Grain Growers' Association, has just been received at the Central office, and is addressed to J. B. Musselman, the Central secretary:

"As one of the delegates from the Mayfield local to the convention, I am writing tendering you my thanks for your work in connection with the convention and the work of the association generally. I certainly appreciate the difficult position you have to fill and the utter impossibility of pleasing everybody."

"I, with some others, was not satisfied with your attitude toward the convention two years ago. Last year and this have revised my opinion. It was a manly thing to stand before the convention and acknowledge you had been mistaken."

"As some bricks seemed to be coming your way I thought perhaps a little thanks might act as a salve to any bruises that may have resulted."

Manitoba

NEW U.F.M. LOCAL AT DRY RIVER

A pleasant evening was spent in the schoolhouse at Dry River, Manitoba, on Friday, February 17, at a meeting called for the purpose of organizing a local of the United Farmers' organization. The children of the school district entertained splendidly, as did also some of the older talent, in putting on a very interesting program. J. L. Brown, M.P., gave a very inspiring address on the present and future political situation as it appeared to him. He also touched briefly on the history of the U.F.M., and his hopes of greater things to be accomplished in the future, after which District Director, J. M. Cruikshank, outlined just a few of the many benefits the people are deriving from the farmers' organization. Following this he took up the business of organization, and stated the plan of campaign as outlined by the provincial president, C. H. Burnell. Election of officers was then called, and the following board was elected: President, Mark Nelson; vice-president, Mr. Cappon; directors, A. McQuarry, A. Balleger, Mrs. M. Nelson, Mrs. L. Robinson, J. Stuart and L. Mondore. When the organization was completed, and dues collected to the amount of twenty-four dollars, all did justice to a very ample lunch which was kindly provided by the ladies. The meeting was closed by the National Anthem.

Alberta

TO BOOST ATTENDANCE

There is still a small number of U.F.A. Calendars to be sold at the reduced price of fifteen cents each, ten cents in lots of ten or more. A suggestion that has been made for locals to increase the attendance at their meetings, is to provide members with these calendars, having the regular meetings of the locals marked in the space provided under each date. Order from the U.F.A. Central Office.

PLAN MEMBERSHIP DRIVE

Believing, as the secretary of Meiba local writes, "that it would be the height of

folly to lessen their interest in their local at the present time, with the encouragement at hand of what the U.F.A. has accomplished, not socially alone, but economically and politically," this local plans a vigorous membership drive in the spring, and they expect that most of the farmers in the community will become members.

At the last meeting the wholesale buying of commodities was discussed, and resolutions were passed, one for the reinstatement of the Wheat Board to handle the 1922 crop, and until such times as world conditions are again normal, and the other to have freight rates lowered to the pre-war level.

DIRECTOR McDANIEL'S MEETINGS
Director H. C. McDaniel, recently addressed a series of meetings on the Lethbridge-Medicine Hat line. Storms and bad roads kept down the attendance at Bowell and Bow Island, but good crowds attended the Winnifred, Whitemud, Seven Persons and Walsh meetings. Mr. McDaniel discussed organization and co-operative matters, and the survey board report.

BIG CAMROSE MEETING

Director G. E. Roose, was the speaker at a big meeting of the Camrose local in the Camrose town hall. His talk on U.F.A. organization progress and the marketing problem was much appreciated.

NEW LOCALS

Three new locals have been organized lately in Battle River. C. A. Fawcett, president of the Coronation District Association, organized Silvercrest local, near Consort, with thirteen paid-up members. The officers are Frank J. Doherty and A. L. Ross-Jones. Jas. McKay, also addressed the organization meeting. Devonia Lake is the name of a new local near Lloydminster, with fourteen members. H. G. Mitchell is president, and F. A. Hobbs, secretary. St. Michael local, with nine adults and one junior member, is also in Battle River constituency, near La Corey. The officers are Jos. Carrier and Henry Dumaine.

Hand Hills Lake local was organized in Bow River constituency. D. Wise is president, and R. G. Horner, secretary.

Director MacFarquhar organized Big Prairie local in West Calgary constituency. There are twelve members, and the officers are A. T. Thomson and Wm. Graham.

Wabamun Lake is the name chosen for a new local in West Edmonton. The organization meeting was called by A. C. Bennett, who was elected president. The secretary is Geo. Merryweather.

W. S. Corry, was in charge of the organization of the Berkemeth local, near Hairy Hill, in Victoria constituency. There are twelve paid-up members, and the officers are W. Greckol and Wm. Lacasta.

A SUCCESSFUL DRIVE

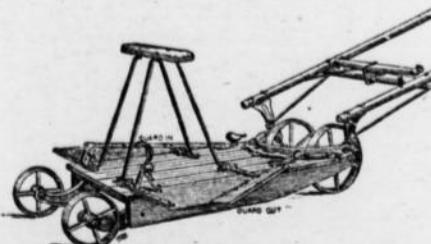
Huron local, at Winterburn, increased their membership by about 40, as a result of their recent membership drive. W. S. Walker and Wm. Campbell headed the two competing teams, and Mr. Campbell's team, being the losers, paid the penalty of furnishing a fowl supper for the whole local. The supper was followed by a very enjoyable whist drive.

Silage Machinery

Continued from Page 8

all bearings and wears them exceedingly fast. Often they are not too well oiled and serious results by way of sudden breaks during filling time can be expected unless looked after. The reversing mechanism is a part of many cutters which wears fast. The spare parts likely to be needed should be kept on hand against the chance of needing them.

As most purchasers of silo cutters will already be supplied with power machinery to drive it, it is well to



A simple type of corn-cutter. Instead of wheels this cutter may run on skids if it is desired to simplify it further.

check up on the matter of speed. Cutters are made to drive at a definite speed in order to get the most satisfactory results. Observe it. Your engine also is built for a certain speed and the flywheel will produce a certain rate of belt travel that may not suit the pulley provided with the cutter if you

Acknowledgement is made of assistance from U.S. Farmers' Bulletin 313, and Nebraska College of Agriculture Bulletin 45.—J.M.S.

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It is "SALADA" for breakfast, for dinner, for supper and five o'clock Tea the Continent wide



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Tea, as staple as our daily bread

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BOYS AND GIRLS—Just look—count them over—you get them all. The fine old game checkers, the game of age cards, the game of Old Maid, the Funny Kissing Game, the Magic Game, the Game of Ten Pins, the laughter making game of Donkey Party, the Game of Lotto and besides all these grand games the wonderful Kinematograph just imported from Europe. It shows greatly enlarged views of all kinds, on which you get a grand assortment. Then you get the famous "Little Sport" Camera, the greatest fun-maker on earth, and the miraculous X-ray curio. Look through it and you seem to see the bones in your hand, the lead in a pencil and many other curious things. Just think of getting all these games and toys without spending a cent.

SEND NO MONEY! Just your name and address on a postcard will bring 35 handsome packages of "Daintees", the new Creme Candy Coated Breath Perfume. Open the FREE EXTRA package we send you to try "Daintees" yourself and ask all your friends to try them. Everyone will like them so much that they will buy two or three packages at once at our special introductory price of only 10¢ each. It's no trouble at all to sell "Daintees". When sold return our money, only \$3.50, and we will at once send the entire outfit of games and toys exactly as shown above, all charges paid. You take no risk as we will take back any "Daintees" unsold and give you handsome prizes or cash commission for all you have sold. Write to-day. Address 148 International Mfg. Co., Dept. G, Toronto, Ont.

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WITH 36 VIEWS

Winners of Doo Dad Books in Doo Dad Coloring Contest

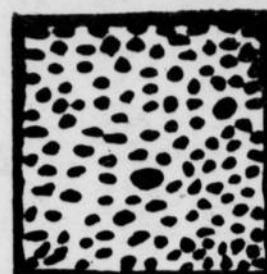
For Week Ending Mar. 4, 1922

CLIFFORD W. ANDREWS, T., SASK.
GLEN CROOKSTON, M., ALTA.
DOROTHY GRIFFIN, H., MAN.
W. A. TODD, V., SASK.

LENA VICTORIA WILDE, A., SASK.
Watch this space next issue for winners for week ending March 11. Full particulars of contest given in lower left-hand corner of this page. You can compete for the Doo Dad book prizes every week if you wish.

Doc Sawbones.

Count These Dots and Win a Phonograph



1st prize: Phonograph.

2nd prize: Wrist Watch.

3rd prize: Camera.

4th prize: Printing Press.

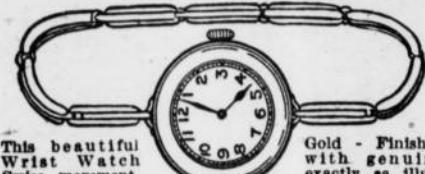
1,000 Big Electric Flashlights and Fountain Pens

BOYS, GIRLS! Count these dots carefully, and be sure you are correct. The best way is to get a pin and make a hole in each dot as you count it. Then send in your answer to us, and we will send you, postpaid, 20 bottles of our "Floral Queen" perfume to sell at 15¢ a bottle. Return the money to us and we will send you a Big ELECTRIC FLASHLIGHT, and for the girls a beautiful FOUNTAIN PEN with 14k gold point.

These prizes do not interfere with the prizes mentioned above, which are given for counting the dots correctly, neatness and promptness in returning the money. The phonograph will play any size and make of record and is not a toy, but a REAL PHONOGRAPH. The other prizes are also just as represented. SEND NO MONEY. WE TRUST YOU.

Lady Dainty, Dept. G. - Toronto

WRIST WATCH FREE



This beautiful Wrist Watch, Swiss movement, trated, is given only \$8.00 worth of Easter Cards and Garden Seeds at 10 cents a packet. Send for them today. WE TRUST YOU. BEST PREMIUM CO., Dept. M8, TORONTO.

Gold - Finished with genuine exactly as illus-

FREE for selling

WHEN WRITING TO ADVERTISERS
PLEASE MENTION THE GUIDE



DOO DAD COLORING CONTEST

Do you want to get one of the Doo Dad Books FREE and a chance, besides, at one of 200 big prizes Doc Sawbones is offering in his \$500.00 Doo Dad Coloring Contest? Then here is what you must do: Color the best you can the picture on this page, write your name, post office, province and age at the bottom of this page, tear the page out, put it in an envelope and mail it to Doc Sawbones, care of The Grain Growers' Guide, Winnipeg, Man. And besides you must also put in this envelope another envelope with your name and address written on it and a one-cent stamp on it, so that I can send back to you a brand-new Doo Dad picture that has never been in The Guide and that will only go to boys and girls who do what I have just said. And, besides, every week for the five best colored pictures sent in I'm going to give FREE one of my big Doo Dad Books. You can color the Doo Dad picture in The Guide each week and send it in, if you want to, and compete for the five Doo Dad Books given each week, but every time you send in the colored picture you must send the stamped envelope with your name and address written on it, and every time you do that I'll send you a new Doo Dad picture. And besides I'll tell you all about my \$500.00 Doo Dad Coloring Contest and the 200 dandy prizes I'm going to give FREE to my boy and girl friends. So take your crayons and color this picture right now, and I'll write you as soon as I get your letter with the stamped, addressed envelope enclosed in it. Your old friend,

Doc Sawbones.

Doc Sawbones was finally obliged to take the Doo Dads away from Candytown, because they were eating such enormous quantities of candy, that he had to sit up half the night, first with this one and then the other.

So loading the body of their wonderful machine with peppermint canes and gum drops, they took off and were soon lost to view in the clouds. But the machine was so heavily loaded that they commenced to have engine trouble. They threw the candy overboard to lighten the load, but still the engine bucked. Pretty soon the machine started to go backward and they went back through February and March and last year, and for centuries, till when they landed they were in the stone age.

How old-fashioned and unreal everything looked!

THE DOO DADS IN THE STONE AGE

Here is the first sight that struck their astonished gaze. This is a Megalosaurus, which Roly, who is not the least bit afraid, promptly christened Meg. The stone age people have trained it to act as a taxi. Isn't that a funny steering gear? It would work as long as Meg held her head up proudly, or even if she just browsed on the dates on the palm trees, as she is doing in this picture, but if she took to eating strawberries the driver would be in trouble. Down in the lower corner you will see one of the stone-age Doo Dads selling the daily news, carved on tablets of stone. Doc. Sawbones and his band don't quite know what to do. But as his Doo Dads are brave little fellows you may be sure they will have a good look round before they depart.

The Farmers' Market

Office of the United Grain Growers Limited, Winnipeg, Man., March 10, 1922.
WHEAT—Today's closing values are near the low point for the week, the market throughout the period having shown a declining tendency. Liquidation in European and American markets by holders of large quantities of wheat eased prices somewhat, and the decline has brought out considerable future delivery and one Northern wheat on which stop loss orders were placed. Local conditions have little effect on values now-a-days, however, the Winnipeg market practically following the larger market to the South. There is little to indicate the future trend. Statisticians claim that supply and demand conditions are evenly balanced and there is no great exportable surplus left in America. The affected areas in the U.S. winter wheat belt have received beneficial rains and snows, but nevertheless considerable damage was done in Kansas, which will reduce the yield considerably.

Export business locally reported as dull, and prices out of line. Decline in premiums on high grade wheat were the result of exporters re-selling on the local market what they could not work eastwards. Cash demand now is just fair with offerings very limited.

FLAX—Steady market, with good demand for cash article. Trade of small proportions, and little flax coming on to the market.

OATS—Prices have declined several cents during past week. Market has been influenced by weakness in wheat prices, and local interests have also been heavy sellers during last couple of days. In the cash market the demand has been dull, indicating that very little business is being worked. Spreads remain practically unchanged from a week ago.

BARLEY—This grain shows a slight decline for the week in sympathy with weakness in other grains. Trade very light in both cash and futures. There is very little pressure on this market and prices will no doubt continue to follow trend of other grains.

Cash Prices at Fort William and Port Arthur, March 6 to March 11, inclusive

Date	WHEAT Feed	C W		OATS		BARLEY		FLAX		RYE			
		2	3	Ex Fd	1 Fd	2 Fd	3 CW	4 CW	Rej.	Fd	1 NW	2 CW	3 CW
Feb. 6	100	52	47	47	46	43	65	63	56	238	233	209	105
7	98	52	46	46	46	42	65	57	63	238	233	209	105
8	98	50	45	45	44	41	64	61	56	240	235	210	106
9	95	48	44	44	43	40	63	60	54	237	232	203	104
10	94	49	44	44	44	41	64	61	56	238	232	208	104
11	94	49	45	45	44	41	65	62	56	237	232	208	105
Week Ago	98	52	46	46	46	42	65	62	55	238	233	209	104
Year Ago	142	49	44	44	42	39	84	72	61	179	174	150	160

WHEAT PRICES

Mar. 6 to Mar. 11 inclusive

Date	Week Year					
	1 N	2 N	3 N	4	5	6
Mar. 6	147	142	132	124	113	106
7	145	140	131	122	111	104
8	144	140	131	122	111	104
9	140	138	127	118	107	100
10	139	135	126	117	106	99
11	139	135	126	117	106	99
Week Ago	144	140	130	122	111	104
Year Ago	190	187	183	177	168	..

WINNIPEG FUTURES

Mar. 6 to Mar. 11 inclusive	Week Year					
	6	7	8	9	10	11
Wheat—						
May	142	140	140	136	135	135
July	136	134	134	131	130	134
Oats—						
May	51	50	50	48	48	49
July	50	50	50	48	48	50
Barley—						
May	67	67	66	65	66	66
July	65	65	64	63	64	64
Flax—						
May	239	239	240	238	238	239
July	237	237	239	236	236	237
Rye—						
May	107	106	107	105	106	106
Year Ago	105	105	105	105	105	162

MINNEAPOLIS CLOSING PRICES

Spring wheat—	No. 1 dark northern, 1.53 to \$1.60; No. 1 northern, 1.51 to \$1.55; No. 2 dark northern, 1.48 to \$1.57; No. 2 northern, 1.45 to \$1.51; No. 3 northern, 1.39 to \$1.47. Montana—No. 1 dark hard \$1.51 to \$1.54; No. 1 hard, \$1.46 to \$1.48. Durum—No. 1 amber, \$1.28 to \$1.34; No. 1 durum, \$1.21 to \$1.27; No. 2 amber, \$1.25 to \$1.31; No. 2, \$1.18 to \$1.22. No. 3 amber, \$1.17 to \$1.27; No. 3, \$1.13 to \$1.29. Corn—No. 2 yellow, 53 to 53½; No. 3 yellow, 51½ to 52½; No. 4 yellow, 50 to 50½; No. 2 mixed, 52½; No. 3 mixed, 50½ to 51½. Oats—No. 2 white, 35½ to 36½; No. 3 white, 35½ to 35½; No. 4 white, 33½ to 34½. Barley—Choice to fancy, 59c to 63c; medium to good, 56c to 58c; lower grades, 52c to 55c. Rye—No. 2, 99½ to \$1.00. Flaxseed—No. 1, \$2.64 to \$2.69.					
	WHEAT PRICES					
WHEAT—	Mar. 6 to Mar. 11 inclusive					
	6	7	8	9	10	11
Oats—	Week Year					
	Wheat—	142	140	140	136	135
Oats—	Mar. 6 to Mar. 11 inclusive					
	May	51	50	50	48	48
Barley—	Week Year					
	May	67	67	66	65	66
Flax—	Week Year					
	May	239	239	240	238	238
Rye—	Week Year					
	May	107	106	107	105	106

WINNIPEG

The Livestock Department, U.G.G. Ltd., reports as follows for week ending March 11:

Receipts this week: Cattle, 1,833; hogs, 2,142; sheep, 242. Last week: Cattle, 1,280; hogs, 3,330; sheep, 473.

Under a liberal run of cattle, prices throughout the week have held steady to strong on practically all the better grades of butcher cattle. Trade in heavy cows was slower and prices a shade lower during the latter half of the week. Possibly the most notable advances in prices during the week is on choice export cattle, and on stockers and feeders, both of which classes are in very keen demand at the present time. The trade in springer cows is a shade more active and no doubt this trade will improve as the grass season approaches.

Following are a few representative sales made by us during the past week:

3 steers from Lavinia, 7c per lb.; 4 steers from Decker, 7½c; 4 steers from Oak River, 7c; 1 steer from Desford, 6½c; 1 steer from Minitonias, 6½c; 2 steers from Desford, 6½c; 3 steers from Wellwood, 6½c; 3 steers from Brookdale, 6½c; 1 heifer from Brookdale, 6½c; 1 steer from Oak River, 6½c; 2 steers from Bethany, 6½c; 1 steer from Morris, 6½c; 1 heifer from Desford, 6c.

In sympathy with Eastern markets hog prices dropped rather severely this week, selects selling today at 11c. The customary grading on heavy hogs is again effective, and all heavies should be marked carefully at home. Top lambs are bringing from 8c to 9c, and top sheep from 4c to 6c.

Do not forget to bring with you health

There is practically no movement of live or fresh dressed poultry. Some frozen chickens are moving in a wholesale way at 20c to 24c, fowl 18c to 22c.

CALGARY—Eggs: This market continues very unsteady with the trade relying chiefly on shipments from British Columbia to supply the local demand. A few cases are being received from local points, but the quality is reported very poor. Dealers are quoting \$12 delivered for candled receipts and \$10 for straight receipts. As the weather is reported warmer an increase is anticipated in local receipts. Poultry, no business reported.

AMERICAN WOOL MARKET

Boston, March 10.—The Commercial Bulletin tomorrow will say:

"There has been no large volume of business put through in the eastern markets this week, but there has been rather

more looking around on the part of certain mills, and altogether there is a little better tone to the market. In the West, there appears to have been no contracting of moment and but little done in the way of consignment of the new clip."

BRITISH CATTLE MARKET

Glasgow sold 89 Ontario cattle from 11½c to 12½c. Thirty-four western cattle brought from 9½c to 10½c. 158 American steers

HORSES

Importers of Clydesdales, Percherons and Belgians

WE are closing out our stock of horses and have some exceptionally good Stallions for sale at half their value.

ALL GUARANTEED. WRITE US.

VANSTONE AND ROGERS
NORTH BATTLEFORD SASK.



For Sale or Hire

PERCHERON or Belgian Stallions to suit pure-bred mares, or for right good draft stallion. Most reasonable prices; three-year terms. Write

CHAS. REAR CORDOVA - MAN.

Receive my reply before purchasing. A new importation arriving.

THE ILLINOIS PERCHERON BREEDERS' ASSOCIATION

FOR SALES LIST, STALLIONS OR MARES address the Secretary.

J. L. EDMONDS - URBANA, ILL.

FOR SALE OR HIRE ON FEDERAL PLAN

Percheron stallion, Major Max, 8313, black, rising four, weight 2,000, first in Edmonton and other shows, sired by Ildifonse, Chicago champion, 1913. Belgian stallion, Duncan, 1395 (9734), bay, five years, weight 2,250, winner Edmonton and other shows. Both class 1 certificate. Bittern Lake Ranch, Bittern Lake, Alta.

FOR SALE OR EXCHANGE—REGISTERED Percheron stallion, Grand View Chief, foaled May 12, 1908, recorded in Percheron Society of America, also Canadian Percheron stud book. Reason for sale, same route for six years. T. H. Drayson, Box 40, Neepawa, Man.

FOR SALE—PERCHERON STALLIONS: ILLUMINE, 1911 champion, Brandon and Regina; Roland A, beautiful ten-year-old black, weighing 2,200; Lumine Perfect, two-year-old son of champion Illumine, imported dam. James Young, Newdale, Man.

FOR SALE—GRAND JIMMY, CLYDESDALE, rising five, BB certificate for Saskatchewan, recently inspected and sound, will weigh over 2,000 pounds in show condition. Reasonable terms. Apply Con DeLaet, Benson, Sask.

SELLING—CLYDESDALE STALLION, LANGFORD'S HOPE, 15587, schedule A, rising nine years, sure foal getter, first prize wherever shown and many times champion. James Glover, Norgate, Man.

SELLING—TWO BELGIAN STALLIONS, chestnut, eight-year-old, 2,100 pounds; three-year-old roan, weight 1,900 pounds. For terms, write Box 9, Venn, Sask.

FOR SALE—REGISTERED CLYDESDALE stallion, Lord Kenelworth, 19474, seven years, sure breeder. Terms. J. T. B. Michelson, Lipton, Sask.

FOR SALE—BELGIAN STALLION, RISING seven, half brother to Marcus, 11058, international grand champion, 1920, sound, sure. Shurmer Bros., Calmar, Alta.

REGISTERED CLYDESDALE STALLIONS, mares in foal or fillies, hire stallion. Sell or exchange for seed and feed oats. Box 65, Tugasse, Sask.

TWO CLYDESDALE STALLIONS, BRED FROM imported stock, all sound, four and five years. Cheap for cash, or will exchange for cattle or work horses. Jas. R. Stewart, Keyes, Man.

FOR SALE—PERCHERON STALLION, REGISTERED, rising four, weight 1,750, serviceably sound, exceptional qualities, \$500. F. H. Duckett, Lacombe, Alta.

FOR SALE OR TRADE—ONE REGISTERED Percheron stallion, eight years, weight 1,850, for five young work mares. Henry Walter, Raley, Alta.

SALE OR EXCHANGE—TWO BLACK REGISTERED Percheron stallions. These are good horses, but we need new blood. C. J. Nelson, Radisson, Sask.

SALE OR TRADE—YOUNG PERCHERON horses, for small thrasher or separator, 20-36 class, standard make. C. I. Albright, Leo, Alta.

WANTED—BY HIGH VIEW BREEDERS' CLUB, black Percheron stallion, under federal plan. Apply A. H. Thompson, Box 42, Kennedy, Sask.

FOR SALE—ONE PERCHERON STALLION, BY Calypso; also cart and harness. Dan Engelhardt, Hanley, Sask.

MUST SELL OR TRADE FOR OATS—BLACK Imported Percheron stallion, \$300. Life certificate. E. Leep, Lancer, Sask.

SALE OR TRADE FOR STOCK OR MACHINERY—Clydesdale stallion, first-class certificate, sure stock getter. Box 41, Dystar, Sask.

GRADE A IMPORTED CLYDESDALE STALLION for sale, or trade young stock. Price \$400. Norval Horner, Creelman, Sask.

FOR SALE—CAR LOAD OF BROKEN FOUR and five-year-old geldings, 1,300 to 1,600 pounds. E. A. Deltombe, Vermilion, Alta.

SELLING—TWO FINE YOUNG REGISTERED Clydesdale mares, bred to a Calgary champion. John D. Waterman, Alix, Alta.

SELL OR EXCHANGE FOR CATTLE OR horses—Clydesdale stallion, Hillcrest Hercules, 14809. W. Sproat, Virden, Man.

SELL OR TRADE FOR WORK HORSES—Clyde stallion, coming four. P. Calder, Cymric, Sask.

FOR SALE—REGISTERED CLYDESDALE stallion, rising eight, weight 1,800, sure foal getter. Price right. John Lippe, Galtman, Sask.

FOR SALE—REGISTERED PERCHERON STALLION, or trade for oats or work horses. E. Smith, Makepeace, Alta.

FOR SALE—REGISTERED PERCHERON STALLION, rising four, sure foal getter, works in harness. R. Henry, Gray, Sask.

TWO PURE-BRED PERCHERON STALLIONS, two and 11 years. Sell cheap or exchange. What offers? Robert A. Smith, Sperling, Man.

WANTED—A CAR LOAD OF GOOD YOUNG work horses. H. J. Skeoch, Box 40, Riverhurst, Sask.

FOR SALE OR TRADE—HORSES, BROKEN or unbroken. W. Mills, Haikirk, Alta.

FARMERS' MARKET PLACE

WHERE YOU BUY, SELL OR EXCHANGE

No money is wasted in Guide classified ads. You say your say in the least number of words and we put your ad. where nobody will overlook it. Over 80,000 farmers can find your ad. every time it runs. Most important—it will run where the most advertising of this kind is run, and where most people (who are in the market) look for offerings. Try the economical way of Guide classified ads. We get results for others and can do it for you.

FARMERS' CLASSIFIED—Farmers' advertising of livestock, poultry, seed grain, machinery, etc., 9 cents a word for 1 or 2 weeks—8 cents a word for 3 or 4 consecutive weeks ordered at once—7 cents a word as a full word, as for example: "T. P. White has 2,100 acres for sale," contains eight words. Be sure and sign your name and address. Do not have any answers come to The Guide. The name and address must be counted as part of the advertisement and paid for at the same rate. All advertisements must be classified under the heading which applies most closely to the article advertised. All orders for classified advertising must be accompanied by cash. Advertisements for this page must reach us seven days in advance of publication day, which is every Wednesday. Orders for cancellation must also reach us seven days in advance.

LIVESTOCK DISPLAY CLASSIFIED—\$6.75 per inch per week; 5 weeks for the price of 4; 9 weeks for the price of 7; 13 weeks for the price of 10. Stock cuts supplied free of charge. Cuts made to order. Cost \$5.00 apiece.

COMMERCIAL—12 cents a word classified—or \$8.40 an inch classified display—flat.

Address all letters to The Grain Growers' Guide, Winnipeg, Man.

CATTLE Aberdeen-Angus

SELLING—TWO REGISTERED ANGUS BULLS, 16 and 26 months, good individuals, champion show stock blood, \$100 each. Will consider half cash or trade for good steers, market price. Norman Powell, Trux, Sask.

TWO REGISTERED ANGUS BULLS, SEVEN and 13 months, \$40 and \$80. Also 14 grade Angus heifers and young cows, \$475. Chas. Gordon, Adanac, Sask.

PURE-BRED ABERDEEN-ANGUS—CHOICE breeding bulls and heifers, also young cows in calf. Satisfaction guaranteed. Connor and Hutchinson, Goodwater, Sask.

SELLING—REGISTERED ANGUS CATTLE, both sex, all ages; two four-year-old bulls, fit to head any herd, prices low. W. S. Scott, Dominion City, Man.

FOR SALE OR EXCHANGE FOR GOOD MILK COWS—Aberdeen-Angus bull, Heroines Sultan, 15391 (250856), four years old. H. W. B. Macdonell, Edam, Sask.

REGISTERED ABERDEEN-ANGUS BULL, Elm Park Edward, bred by Bowman, Guelph, \$200. E. A. Johnston, Smiley, Sask.

WILLOW BEND FARM OFFERS REGISTERED Angus bulls, ready for service. Quality and price right. T. S. Coyle, Eatonia, Sask.

SELLING—18 CHOICE REGISTERED ABERDEEN-ANGUS BULLS, also a few females. Gabrielson Bros., Rosthern, Sask.

ANGUS BULL CALVES—TWO, 20 MONTHS, \$90 each; five, nine months, \$50 and \$60 each. Email Anderson, Box 98, Dubuc, Sask.

FOR SALE—ANGUS BULL, FOUR YEARS OLD, guaranteed sure; cost four hundred, price one hundred. J. Nesbitt, Roland, Man.

Shorthorns

SHORTHORNS—THREE BULLS, FROM TEN months to two years, real good animals; cow, three years, with bull calf six months, cow in calf again. All registered. Part cash. Write your wants. James Lind, Box 190, Estevan, Sask.

SELLING—DEEP RED, PURE-BRED REGISTERED Shorthorn bull, five years old, guaranteed first-class breeder. Price \$85. Mrs. Wm. Henderson, Quinton, Sask.

FOR SALE—TWO REGISTERED SHORTHORN BULLS, Write for particulars and prices. John Robertson, Tullymet, Sask.

SELLING—THREE REGISTERED SHORTHORN BULLS, eight to 22 months. Prices right. A. Vestine, Entwistle, Alta.

SALE OR EXCHANGE—REGISTERED SHORTHORN BULL, four years. Will exchange for registered Holstein. Morrow Bros., Whitewater, Man.

FOR SALE OR EXCHANGE—THREE-YEAR-OLD Shorthorn bull. V. Gruey, Strassburg, Sask.

SELLING—THREE REGISTERED SHORTHORN BULLS, aged 14 months. Cheap. T. R. Fry, Moosomin, Sask.

FOR REGISTERED SHORTHORNS OF HIGH quality, right prices and terms. Welch Farm, Marquette, Man.

FOR SALE—SHORTHORN BULLS AND heifers; herd under accreditation. J. H. Tolton, Oak Lake, Man.

SELLING—PURE-BRED MILK-STRAIN Shorthorn bull, four years, gentle, \$125, f.o.b. Menisino, Man. Adolf Anne.

Red Polls

What All Farmers Should Know

HOW much is it worth to you to have a sire whose steers will be built on the same generous beef lines, and whose daughters will earn their living, and yours, too, at the pail?

For further information and literature write, P. J. HOFFMANN, Secretary, Canadian Red Polled Association, ANAHEIM, SASK.

SELLING—REGISTERED RED POLLED BULL, age three, proved excellent herd header. Price attractive. Gus Pearson, Macoun, Sask.

SELLING—REGISTERED RED POLLED bulls, from imported sire, also a few choice females. Frank Crawshaw, Macoun, Sask.

Jerseys

FOR SALE—TWO PURE-BRED JERSEY BULLS, or exchange one. J. D. McLean, Killarney, Man.

FOR SALE—CAR LOAD OF BROKEN FOUR and five-year-old geldings, 1,300 to 1,600 pounds. E. A. Deltombe, Vermilion, Alta.

SELLING—TWO FINE YOUNG REGISTERED Clydesdale mares, bred to a Calgary champion. John D. Waterman, Alix, Alta.

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FOR SALE OR TRADE—HORSES, BROKEN or unbroken. W. Mills, Haikirk, Alta.

and the farmer who is particular enough about his stock to put up a silo usually has well-bred stock. Those with pure-bred livestock for sale are reporting results from their classified ads. like these:

"I put an ad. in your paper in December last, Duroc Boars for sale, and when the first ad. came out I sold all my boars through it, and got more enquiries than I could fill."—H. H. Reilly, Wynyard, Sask.

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The Guide has the most readers—therefore the greatest number of buyers. People wishing to Buy, Sell or Exchange, look for the biggest market. The Guide carries more classified ads. than all other farm papers in Western Canada. It is the only weekly farm paper in the West. It gives you a low rate and gets your ad. there first. Send your ad. today and get your share of the orders.

Address all letters to The Grain Growers' Guide, Winnipeg, Man.

The Grain Growers' Guide

Duroc-Jerseys

SELLING—CHOICE REGISTERED DUROC sows, bred to son of imported parents, Orion family; due April and May. Prices right. Satisfaction guaranteed. W. G. Carr, Leney, Sask.

REGISTERED DUROC BOAR, WEIGHT ABOUT 500 pounds, 23 months, \$35. Thos. Upton, Denell, Sask.

SELLING—WILLOW FARM DUROC BRED sows, fall boars. M. J. Howes & Sons, Millet, Alta.

REGISTERED DUROC-JERSEY GILTS, March farrow, for sale, \$45. Thos. H. Pearon, Radisson, Sask.

VERY CHOICE DUROC-JERSEY GILTS, BRED to farrow April, \$55, with pedigree. William Bos, Shackleton, Sask.

Poland-Chinas

SELLING—BOB WONDER, 9136, LONG, smooth, deep-sided boar. Bargain price. Few of his get, farrowed January, 1922. Boars, \$16; sows, \$12. Oscar Loiselle, Vonda, Sask.

BIG TYPE POLAND-CHINAS. OTTO MILLS, Togo, Sask.

BIG TYPE POLAND-CHINA HOGS. D. A. Brown, Rumsey, Alta.

Hampshires

REGISTERED HAMPSHIRE BRED GILTS, farrow last April, \$35 and \$40. F. M. Bessey, Bladworth, Sask.

Dogs, Foxes, Furs and Pet Stock

SELLING—PEDIGREED SCOTCH COLLIE farm-bred pups, parents excellent heelers, intelligent and obedient. Bitches, \$12; dogs, \$15. Pedigree and photo of sire heelers furnished. One, seven months, \$25. Walter Roewe, Neepawa, Man.

MUSKRATS—I WANT 10,000 RATS. WILL pay up to \$1.30 average. W. C. Davis, Springside, Sask.

SEED GRAIN—Various

Special Freight Rates
on Seed Grain

In order to secure the special freight rate on grain bought for seed purposes, it is necessary for the purchaser to secure a certificate. This is obtained from the Central Secretary of your Provincial farmers' organization, either direct or through the secretary of your United Farmers' or Grain Growers' local. Forward this certificate to the party from whom you are buying the seed grain. This certificate must show the quantity and kind purchased. The seller and shipper of the seed grain should present this certificate to the local freight agent at time of shipment. The agent will show on freight bill that the shipment is for seed grain purposes and therefore entitled to special freight rate.

CLOVER SEED

WE have a large quantity of ALSIKE Seed for sale. Also ALSIKE and TIMOTHY mixed. Government Standard Grade No. 1.....20c lb. Government Standard Grade No. 2.....15c lb.

Wire or write for samples.

GRAIN

We are buyers of FEED and SEED OATS. We will also buy your heated grades of wheat. Will pay good premium for good samples. Government grade and inspection.

MOUNT MCKAY FEED CO. LTD.
FORT WILLIAM
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We Can Handle Your Order

for any quantity of the following, which are specially selected, re-cleaned and suitable for seeding purposes:

GOVERNMENT INSPECTED
No. 1 SEED OATS. No 1 NORTHERN,
grown from Marquis seed.

DURUM WHEAT
All samples have been tested for germination. Prices on application.

MCMILLAN GRAIN CO.
455 GRAIN EXCHANGE WINNIPEG

Lloydminster District—The
Seed Garden of the West

RED BOBS
KITCHENER AND
MARQUIS WHEAT
REGISTERED BANNER
GOLD RAIN
VICTORY AND
LEADER OATS
RYE FEED GRAINS BALED HAY
FREDERICK IND
LLOYDMINSTER SASK.

LOOK! READ THIS!

A SPECIAL OFFER TO YOU.
WRITE AT ONCE FOR MY SPECIAL OFFER
AND PARTICULARS.
SEAGER WHEELER'S SELECTED SEED
SEND for my seed list, particulars and price
of my Registered Marquis, 10B. Best selection
of Red Bob. Big cut in prices this season
Also Kitchener Wheat and my heavy-yielding
strains of Registered Victory Oats and Gold
Nugget Potatoes. Address
SEAGER WHEELER ROSTHERN Sask.

TEN CARS

MARQUIS Wheat, Five Cars Banner, Five Cars
Victory Oats, suitable for seed; all grown
under the rules of the C.S.G.A., and all eligible
for registration.

We also have three cars Marquis Wheat,
cleaned and tested for germination; also three
cars Choice Oats which we will sell on sample.

Write or wire for samples and prices, quantity
and quality wanted.

WOODWARD & COMPANY LIMITED
GRAIN EXCHANGE, WINNIPEG

SEED GRAIN Write for Samples
and Prices
CARNEFAC STOCK FOOD CO. LTD.
WHOLESALE AND RETAIL
HAY AND GRAIN MERCHANTS
174 KING ST., WINNIPEG

SELLING—WHEELER'S RED BOBS SUPREME,
\$1.50. First generation Canadian Thorpe barley
\$1.25; same barley, unregistered, 80 cents. Banner
oats, first generation, \$1.00; Banner, unregistered,
75 cents; purity guaranteed. Chas. Grant, Box 66,
Winnipeg.

SELLING—KITCHENER WHEAT, \$1.40;
spring rye, \$1.25; pure Mensury barley, 90 cents;
sacks included. Otto Richardt, Nutana, Sask.

FREE—SPLENDID PREMIUMS FREE WITH
orders for Harris McFayden seeds. You are going
to need seeds of some sort anyway. Why not get
a premium free? Prices right. Highest quality
Money-back guarantee. We want everyone to try
our seeds, and we are going to pay you to try them
this season. We know you will continue to use
them next year. Investigate our remarkable
offer. Harris McFayden Seed Co. Limited, Farm
Seed Specialists, Winnipeg

CHOICE MILLET SEED, CLEANED, NO
noxious weeds, \$3.50 per 100 pounds; bags extra,
20 cents. 600 bushels No. 1 Marquis seed wheat,
off breaking, threshed before rain, no noxious
weeds, cleaned, \$1.25 bushel; bags extra. 800
bushels Banner oats, mill run, no noxious weeds,
45 cents bushel; bags extra. 100 bushels early
Olive potatoes for seed, \$1.00 bushel; bags included.
Wm. J. Shaw, Imperial, Sask.

SELLING—HANNCHEN BARLEY, PURE, GER-
mination 94, third prize Saskatchewan seed fair,
cleaned and sacked, 85 cents per bushel. Quantity
pure Banner oats, free from noxious weed seeds,
cleaned and sacked, 60 cents per bushel. James
Ruge, Elstow, Sask.

SELLING—RED BOBS SUPREME WHEAT,
\$2.00 per bushel, sacks extra. Also 3,000 bushels
Abundance oats, free from noxious weed seeds.
B. Prosser, Evesham, Sask.

SUPERIOR GRAIN—TO LARGE GROWERS.
Have three cars Red Bob, one Ruby, two Victory
oats, Calgary elevator; car each also Dalemead
Farm. Might bulkhead cars. Take note of address.
Rudolph, Dalemead, Alta.

WHITE BLOSSOM SWEET CLOVER SEED,
\$14.00; also Kubanka wheat and spring rye,
\$1.50 and \$1.00 bushel respectively, sacked.
Charles Meek, Wallard, Sask.

O.A.C. 21 BARLEY, \$1.00. RED BOBS, \$1.25.
Marquis, \$1.25. progeny eligible registration,
official germination 98%, cleaned, bagged. Arthur
Hibbert, Waskada, Man.

SELLING—4,000 BUSHELS BANNER OATS,
1,000 bushels Marquis wheat, grown from regis-
tered seed, off breaking. For particulars, apply
A. A. Hay, Foxwarren, Man.

FOR SALE—SEED, MARQUIS WHEAT, PURE
Leader oats, O.A.C. barley; absolutely free from
noxious weeds. Small orders receive special
attention. Viewfield Farms, Oak Bluff, Man.

RUBY WHEAT, 66-DAY OATS AND BANNER
oats, from registered seed. Pomeroy, Roblin,
Man.

OATS, BARLEY, WHEAT, HAY IN CAR LOTS.
Write or wire for prices. Fred Clark, Assinibola,
Sask.

Wheat

IMPROVED MARQUIS, GROWN UNDER THE
Canadian Seed Growers' Association rules since
1912, grade one northern, free from all impurities,
high germination, cleaned, \$1.45 bushel; including
sacks, \$1.55. A. H. Bryan, Bridgeford, Sask.

WHEELER'S SUPREME WHEAT, PURE-BRED,
earlier, out-yields Marquis, \$2.50 bushel. Early
wheat escapes rust and frost. Pure Ruby wheat
off breaking, re-cleaned, sacked, \$2.10 bushel.
Frankey, Quill Lake, Sask.

GROW DURUM WHEAT FOR CROP ASSUR-
ance and profit. Kubanka, \$1.50; Red Durum,
rust-proof, high yielder, \$1.50; cleaned, sacked.
Samples 10 cents. Robt. Blane, Barrowby,
Man.

BURBANK'S QUALITY WHEAT SEED YIELD-
ed, 1920, 54 bushels per acre; 1921, 51 bushels per
acre, in Kelowna district, without irrigation.
\$2.50 per bushel, f.o.b. Kelowna. A. W. Cooke,
Box 126, Kelowna, B.C.

NO. 43, THE IMPROVED RED BOBS. THE
seed I offer has passed Canadian Seed Growers'
field inspection 100% pure. Satisfaction guaran-
teed. \$2.00, sacked, cleaned. Sample free. Henry
Young, Millet, Alta.

SELLING—REGISTERED 10B MARQUIS
wheat, \$2.00. Red Bob, \$1.50. Second generation,
from Wheeler's seed. W. Goodspeed, Rutland,
Sask.

SELLING—SEED WHEAT, SEAGER WHEELER'S
selected strain of Red Bob Supreme, \$1.75
bushel, f.o.b. Estuary. J. B. Morgan, Gilnockie,
Sask.

1,000 BUSHELS KITCHENER SEED WHEAT,
\$1.50 bushel. Sample free. Sold 1,500 bushels
locally for seed. Out-yields Marquis here. Don-
robin Farm, Box 277, Delta, Alta.

SELLING—PURE RED BOBS, CLEANED,
sacks included. \$1.50 J. H. Schmalz, Beiseker,
Alta.

SELLING—TWO CARS RED BOBS SEED
wheat, one car Ruby wheat. Prices, samples on
request. John Laing, Blackfalds, Alta.

SELLING—RUBY WHEAT, GROWN ON
breaking, \$1.40 bushel. Chas. Shadbold, Benito,
Man.

PURE KITCHENER WHEAT, THIRD GENERA-
TION, \$1.50 bushel, cleaned, sacks included; limited
quantity. A. Reed, Moosebank, Sask.

SELLING—PURE RED BOBS WHEAT, GRADES
one northern, cleaned and sacks included. \$1.60
per bushel. J. E. Hamilton, Zealandia, Sask.

EARLY RUBY WHEAT, OFF BREAKING,
clean, dry samples, \$1.50 sacked. Edward Lumby,
Heath, Alta.

SEED WHEAT—BURBANK'S QUALITY,
Variety, cleaned and bagged, \$2.50 bushel. W.
H. H. McDougall, Kelowna, B.C.

SELLING—KITCHENER WHEAT, OFF BREAK-
ING, McKenzie's 96 oats. Prices, etc., on request.
T. Pickard, Guernsey, Sask.

RUBY WHEAT, SECOND GENERATION, OFF
breaking, one dollar fifty cents bushel, f.o.b.
Sedgewick. C. Disturnal, Sedgewick, Alta.

PURE RUBY WHEAT, \$1.50 PER BUSHEL;
sacks included. Walter Tait, Meota, Sask.

SELLING—PURE RUBY WHEAT, \$1.40 BUSHEL
at Viking. J. Rosenthal, Viking, Alta.

Oats

LEADER OATS—GOVERNMENT GERMINA-
TION and purity test, germination 97% in six days,
samples and copy of certificate sent upon applica-
tion. 50 cents per bushel, cleaned bags extra or
send your own; f.o.b. Plunkett, Sask. W. R.
Seabrook.

SELLING—THREE CARS BANNER OATS, 40
cents; two cars Leader oats, 45 cents; quantity
Sixty-day oats, 50 cents; from pure seed, free from
wild oats; germination 98. Richards Bros., Lash-
burn, Sask.

LEADER OATS, AWARDED SECOND, SAS-
katchewan provincial seed fair, 60 cents bushel,
sacks included. Delivery March 10. Vincent
Ballock, Luseland, Sask.

LIBERTY HULLESS OATS, GOVERNMENT
germination test 97 per cent. \$2.00 bushel (34
pounds), bags free; less than three bushels, bag
20 cents J. Hicks, Hatherage, Alta.

SELLING—AMERICAN BANNER OATS,
grown from registered seed, free from wild oats or
other seeds, 75 cents bushel, sacked. Shipped on
approval. W. Cummings, Strathclair, Man.

SELLING—3,000 BUSHELS VICTORY SEED
oats, at Fort William, price on tract, f.o.b. Angus-
ville or Foxwarren. Wm. Burgess, Foxwarren,
Man.

SELLING—LEADER SEED OATS, THIRD
generation, cleaned, high germination test, 25-
bushel lots or more, 50 cents bushel. Samples on
request. Edwin Bowman, Guernsey, Sask.

FOR SALE—TWO CARS BANNER OATS,
two cars Victory oats; good germination; small
premium over market. Walter Greer, Lashburn,
Sask.

SELLING—2,300 BUSHELS BANNER AND 500
bushels Victory seed oats, germination test 100%.
Samples on request. Offers solicited. D. William-
son, Hardisty, Alta.

FOR SALE—RE-CLEANED BANNER SEED OATS,
2 C.W., weight over 40 pounds, 94 germination
six days; car lots, 50 cents bushel, f.o.b. Aldersyde,
Alta. L. W. Barrett, Aldersyde.

BANNER OATS, MACHINE RUN, NO NOXIOUS
weeds, 40 cents bushel. Armstrong, Rockhaven,
Sask.

SELLING—3,000 BUSHELS BANNER CLEAN
seed oats. Sample and price on request. A.
Carfantin, St. Brieux, Sask.

GOLD RAIN OATS, CLEAN SEED, WEIGHT
42 pounds bushel, 99% germination, 55 cents.
Sidney Sacks, Springfield, Man.

CAR BANNER OATS, TEST 98, MACHINE
run, 45 cents, f.o.b. Salvador. Frank Woodward,
Salvador, Sask.

SELLING—BANNER SEED OATS, TEST 96,
price 50 cents. Enquire, M. Bannick, Yorkton,
Sask.

FOR SALE—SEED AND FEED OATS. PILGER
Bros., Oshawa, Alta.

SELLING—CAR GOOD SEED OATS, 40 CENTS.
Frank Oliver, Imperial, Sask.

10-2

Barley

BARK BARLEY, GERMINATION TEST 98,
\$1.00 bushel, f.o.b. Headingley, Man. F. W. Watt,
507 Great West Permanent Building, Winnipeg.

BARK BARLEY, GROWN ON BREAKING,
cleaned, 90 cents bushel; send sacks. I. Rennie,
East Anglia, Sask.

BEARLESS BARLEY, GROWN FROM HAND-
picked seed, \$1.00 bushel; bags 50 cents extra.
D. McGillivray, Macdonald, Man.

HANNCHEN BARLEY, FIRST GENERATION,
\$1.50 bushel, f.o.b.; sacks included. John F.
Allan, Naseby, Sask.

BARK'S BARLEY, BIG YIELDER, GOVERN-
MENT germination test 98, price \$1.00 bushel;
sacks extra. L. J. Auten, Ponoka, Alta.

SELLING—CLEAN CANADIAN THORPE BAR-
LEY, 1920 crop, test 100%, \$1.00 bushel, sacked;
machine run. Charles Kastner, Morris, Man.

Flax

PREMOS FLAX, GROWN ON BREAKING
from registered seed, perfect germination, re-cleaned,
\$2.50 Sidney Sacks, Springfield, Man.

CHOICE PREMOS FLAX, \$2.25 BUSHEL.
Clean Bark's barley, \$1.00 bushel; bags extra.
J. H. Pritchard, Roland, Man.

SELLING—GOOD SEED FLAX, RECLEANED,
\$2.50 bushel. Alf. Potter, Deloraine, Man.

11-3

Corn

RUSH'S EARLY GOLDEN JEWEL SEED CORN,
\$2.00 bushel; will mature anywhere. Spring wheat.
Grass. Roy Rush, St. Lawrence, South Dakota,
U.S.A.

10-6

The Cheerful Plowman

By J. E. Tuft



Night School

Our hired girl, Pauleen, and Pete, our hired man, are trying—I urged it—a new kind of plan. We have a night school at the local town hall, for grown-ups and those who cannot read at all. Both Pete and Pauleen could read very well, and write, and subtract, and do adding and spell; my wife and I taught them the best that we could, but now what they're getting is three times as good. Three teachers nearby and three good farmers' wives, who used to be teachers in their younger lives, are handling the school, and by Jing and by gee, the good that they do is surprising to me! Why, Old Man McLaughlin, who all through his life has done all his writing by means of his wife, at sixty years old has found out how to write, and read his first "chapter" last Saturday night! And Pete and Pauleen! The way that they learn would make your head swim and your eyelashes burn! Decimals, fractions, percentage, Bombay, Lincoln, and Gladstone and Lord Castle Reigh; all about earthquakes, and sunstrokes, and nouns; locations of islands, and oceans and towns. When this term is ended Pauleen and Pete will have a book knowledge that's fairly complete. Instead of my teaching them longer, I see, they will both turn around and begin teaching me!

Grass Seed

BROME AND WESTERN
RYE GRASS SEED

of best quality. Send for free pamphlet re their
culture. Warehouse on track; prompt shipment.
Brome Seed, 12c; Western Rye, 10c; both mixed,
half and half, 10c per lb. Allow 14 lbs. per
acre. No order too small. Special price on
car-load lots.

HALLMAN GRASS SEED GROWERS
BENTON, ALTA.

NO. 1 Grade, also No. 1 purity test. Cleaned,
graded, tested and shipped direct from Alberta
Government Elevator, Calgary. Price \$13.50,
bags free, f.o.b. Calgary. Order from grower.

JOHN

Poultry Supplies

FOR SALE 3,600 Sectional Hot Water Incubator, perfect condition. Reason for selling: Have lost all my birds and part of equipment by fire; also few 600 Canoe Sections. JOHN C. LONGMORE, 11823-85th Street, EDMONTON, ALBERTA.

INCUBATORS 1922 CATALOG SENT FREE It illustrates incubators, brooders, egg boxes, grain sprouters, leg bands, everything. Wonderfully interesting. Write today. Brett Manufacturing Company, Winnipeg.

130-EGG WISCONSIN INCUBATOR AND brooder, complete, nearly new, \$18. Theodor Friedricksen, Drake, Sask.

Turkeys, Ducks and Geese

SELLING—BRONZE TURKEYS FOR BREEDING purposes. Hens, \$8.00 each; one exceptionally fine gobbler, \$12. Guaranteed strong, healthy birds. Mrs. E. E. Baynton, Biggar, Lake, Sask.

FAWN CHINA GESE, HEAVIEST LAYING geese known. Ganders, \$7.50; geese, \$5.00. Eggs in season, 50 cents each. Stock imported from England. F. G. Race, Hazelcliffe, Sask.

PURE-BRED MAMMOTH BRONZE TURKEY toms, 22 to 25 pounds, \$10. Herbert Fowler, Zealandia, Sask.

PURE-BRED MAMMOTH BRONZE TURKEY toms, \$7.00 and \$10. Mrs. Bond, Dubuc, Sask.

MAMMOTH BRONZE TURKEY TOMS, \$7.00: hens, \$5.00; fine large birds. Mrs. Allen, Hughenden, Alta.

SELLING—PURE WHITE PEKIN DRAKES, \$2.50; ducks, \$2.00. Three ducks, one drake, \$7.50. Mrs. Roycroft, Simpson, Sask.

SELLING—PURE-BRED MAMMOTH BRONZE turkey toms, large size, \$9.00. Thom Jarrett, Weyburn, Sask.

PURE-BRED MAMMOTH BRONZE TURKEY toms, \$8.00, 20 to 28 pounds: one two-year-old, \$10. Mrs. Albert Young, Kinley, Sask.

SELLING—BRONZE TURKEY TOMS, 18-22 pounds, \$9.00; later hatch, 16-18 pounds, \$7.00. Millard Green, Melora, Man.

PURE WHITE PEKIN DRAKES, \$3.00; DUCKS, \$2.50. Large white turkey tom, \$8.00. Walter Garner, Weyburn, Sask.

FOR SALE—BRONZE TURKEYS, 22-POUND toms, \$10. 11-pound hens, \$7.00. James Clark, Macdonald, Alta.

MAMMOTH BRONZE TURKEYS—TOMS, \$7.00; hens, \$4.00. Reg. Haskell, Glenboro, Man.

LARGE WELL-BRED MAMMOTH BRONZE turkey hens, \$7.00 each. Mrs. Walter Dales, Box 68, Sperling, Man.

PURE-BRED WHITE HOLLAND TOMS, BIRDS that please, \$6.00 and \$8.00. James Wallace, Borden, Sask.

MAMMOTH BRONZE GOBBLERS, FROM 40-pound stock, \$10. Toulouse geese, \$10 pair. Hillside Farm, Nanton, Alta.

SELLING—FOUR BOURBON RED TURKEY toms, \$7.00 each. Mrs. Frank Gilbert, Drinkwater, Sask.

SELLING—PURE-BRED WHITE EMBDEN ganders, \$5.00. A. Brooks, Tramper Lake, Sask.

WHITE HOLLAND TURKEYS, GOBBLERS, \$6.50. Grassmere Farm, Halford, Sask.

FOR SALE—PURE-BRED TOULOUSE GAN- ders, \$5.00. W. M. Ryan, Ninga, Man.

BRONZE TURKEY TOMS, AVERAGING 30 pounds, \$10. Miss B. Mitchell, Roblin, Man.

WHITE HOLLAND TURKEY TOMS, \$10. Gordon Taylor, Rossburn, Man.

PURE-BRED PEKIN DUCKS, \$2.50; DRAKES, \$3.00. Melvin Park, Carman, Man.

FOR SALE—PURE-BRED PEKIN DUCKS, \$2.00; drakes, \$2.50. Lewis Burgess, Lauder, Man.

FOR SALE—WHITE HOLLAND TOMS, FIVE to seven dollars. Wm. Ruttan, Carlyle, Sask.

CHOICE MAMMOTH TOULOUSE GANDERS, \$7.00. Mrs. J. D. Wheeler, Tofield, Alta.

PURE-BRED PEKIN DRAKES, \$2.50. MRS. OWENS, Dubuc, Sask.

WHITE HOLLAND TURKEY TOMS, PRICE \$7.00. Mrs. Kampwirth, Windthorst, Sask.

PURE-BRED TOULOUSE GANDERS, \$5.00; geese, \$4.00. W. J. Corneock, Greenway, Man.

MAMMOTH BRONZE TURKEY TOMS, 20-22 pounds, \$9.00. George Leask Marcellin, Sask.

PURE-BRED MAMMOTH BRONZE TOMS, \$8.00. Ray Usher, Provost, Alta.

Orpingtons

PURE-BRED BUFF ORPINGTON COCKERELS, strong, vigorous birds, from good laying strain, \$3.00 and \$5.00; young hens, \$2.50 each. James Dykes, Elbow, Sask.

BUFF ORPINGTON COCKERELS, EXTRA laying, prize-winning strain, \$3.00 and \$5.00 each. G. P. White, Redvers, Sask.

BUFF ORPINGTON COCKERELS, McARTHUR strain, \$3.00, \$5.00, \$7.50, \$10. C. P. Klombe, Lashburn, Sask.

PURE-BRED BUFF ORPINGTON COCKERELS, April hatched, three dollars each. Mrs. C. F. Smith, Miami, Man.

SELLING—PRIZE-WINNING PURE-BRED Buff Orpington Cockerels, \$5.00 and \$7.00. August Cosman, Box 591, Neepawa, Man.

BLACK ORPINGTON COCKERELS, \$3.00, from exhibition stock. J. Devins, Carstairs, Alta.

BUFF ORPINGTON COCKERELS, \$2.00, \$2.50 F. A. Jacobsen, Lacombe, Alta.

CHOICE BUFF ORPINGTON COCKERELS, \$2.00 each. C. N. or C. P. Stockton Limited, Wordsworth, Sask.

PURE-BRED BUFF ORPINGTON COCKERELS, \$3.00 each. Andrew Black, Margaret, Man.

BUFF ORPINGTON COCKERELS, \$3.00 EACH; three for \$8.00. H. B. Laurence, Marquis, Sask.

PURE-BRED BUFF ORPINGTON COCKERELS, \$2.50. Oliver Anderson, Keeler, Sask.

Orloffs

KENNEDY'S MAHOGANY, SPANGLED AND White Orloffs are wonderful layers in cold weather, a rare fowl that you will appreciate. Write for announcement giving fullest information, gladly sent free. John R. Kennedy, 1357 Kingston Road, Toronto, Canada.

Rhode Islands

ROSE SINGLE COMB REDS—WINNERS PAST ten years, also egg-laying contest, Utility. My Reds won over all Reds, provincial show, British Columbia, 1922. Eggs, five dollars; baby chicks, \$35 hundred. Robert N. Clarke, Vernon, B.C.

SELLING—OUR NOTED BRED-TO-LAY R. I. Red cockerels, both combs, red to the skin, \$3.00 and \$5.00 each. Eggs in season, \$2.50 per 15. Mrs. N. A. Dane, Howard, Sask.

PURE-BRED ROSE COMB RHODE ISLAND Red cockerels, March hatched, dark, good laying strain, \$3.00, \$4.00. Mrs. Ben Newton, Vanguard, Sask.

ROSE COMB RHODE ISLAND RED COCK- erels, eggs purchased from the Agricultural College at Saskatoon, \$5.00 each. F. L. Neel, Sidewood, Sask.

SELLING—EXHIBITION ROSE COMB RED cockerels, sired by my first Winnipeg cock, \$5.00 each. Satisfaction guaranteed. J. J. Enns, Winkler, Man.

ROSE COMB RHODE ISLAND RED COCK- erels, large, beautiful dark birds, prize-winning stock, \$3.00, \$5.00; pullets, \$3.00. C. Deer, Tiny, Sask.

SINGLE COMB RHODE ISLAND RED COCK- erels, \$5.00 each, brothers to my Saskatoon winners; pullets, \$3.00 each. J. M. Coates, Delisle, Sask.

PURE-BRED ROSE COMB RHODE ISLAND Red cockerels, \$3.00 each; two for \$5.00. New blood for old customers. Winter laying strains Frank Crawshaw, Macoun, Sask.

FOR SALE—PURE-BRED RHODE ISLAND RED cockerels, choice single comb birds, \$3.00 each. Clement Peters, St. Benedict, Sask.

SELLING—PURE-BRED ROSE COMB RHODE Island Red cockerels, \$3.00 each; \$5.00 pair. C. H. Spencer, Carnarvon.

SINGLE COMB RHODE ISLAND REDS—EGGS in season, first pen, \$2.50 for 15; second pen, \$2.00. Mrs. E. Pearson, Vanguard, Sask.

PURE-BRED SINGLE COMB RHODE ISLAND Red cockerels, beautiful birds, \$2.50. Mrs. Owens, Dubuc, Sask.

SELLING—IMPORTED RHODE ISLAND cockerels, prize winning, \$2.00. Eggs for hatching. Also spring rye. Losey, Winkfield, Alta.

PURE-BRED ROSE COMB COCKERELS, DARK color, \$5.00 pair; single, \$3.00; good laying strain. William Oglevie, Briercrest, Sask.

SELLING—R. C. R. I. RED COCKERELS, OF winter-laying strain, clear dark red and large, \$2.50 each. Baragar Bros., Elm Creek, Man.

PURE-BRED R. C. R. I. RED COCKERELS, \$3.00. A. H. Padgham, Box 194, Biggar, Sask.

Leghorns

BRED-TO-LAY S. C. WHITE LEGHORN BABY chicks. Our prices show big reduction this season. Write for price list showing our guarantee, etc. White Feather Poultry Yard, Deloraine, Man.

SINGLE COMB WHITE LEGHORN COCKERELS, April hatched, from good laying strain, \$3.00 each, or two for \$5.00. C. Cuthbert, Glenora, Man.

PURE-BRED ROSE COMB BROWN LEGHORN cockerels, splendid upright, vigorous birds, \$3.00 each, two, \$5.00. Satisfaction guaranteed. Milo Yearous, Cadogan, Alta.

SELLING—WELL-DEVELOPED AND BRED- to-lay S. C. White Leghorn cockerels, \$3.00 each, or two for \$5.00. Mrs. S. Rogers, Walpole, Sask.

SELLING—WELL-DEVELOPED AND BRED- to-lay S. C. White Leghorn cockerels, \$3.00 each, or two for \$5.00. Wesley Horn, Ardath, Sask.

ROSE COMB DARK BROWN LEGHORNS, choice breeding and exhibition cockerels, \$5.00; three for \$12.50. Walter Moore, 757 Ashburn St., Winnipeg.

PURE-BRED ROSE COMB DARK BROWN Leghorns. Hens, pullets, \$2.00 each; cockerels, \$5.00; heavy layers: prize winners. Dr. Part, Provost, Alta.

SELLING—PURE-BRED ROSE COMB BROWN Leghorn cockerels, beautiful birds, \$2.50; two for \$4.00. J. M. Goodall, Chauvin, Alta.

ROSE OR SINGLE COMB BROWN LEGHORN cockerels, \$2.50 each. Mrs. Elsie Johnson, Tuffnell, Sask.

PURE-BRED SINGLE COMB WHITE LEG- horn cockerels, \$3.00 each; two, \$5.00. Wesley Horn, Ardath, Sask.

15 WHITE LEGHORN EGGS, FERRIS 264 strain, \$2.00. Cockerels, pullets, \$5.00. Jack Stewart, Druggist, Prince Albert, Sask.

SELLING—ROSE COMB BROWN LEGHORN cockerels, \$3.00; hens, \$1.50. Satisfaction guaranteed. Arthur Hoefling, Alliance, Alta.

GET MY NEW MATING LIST OF TOM BAR- ron Leghorns and Wyandottes. J. J. Funk, Winkler, Man.

SELLING—PURE-BRED S. C. WHITE LEG- horn cockerels, University strain, \$4.00, two, \$7.00. J. A. Miller, Maple Creek, Sask.

PURE-BRED SINGLE COMB BLACK LEG- horn cockerels, \$3.00 each, two for \$5.00. Chas. Lundquist, Masouin, Sask.

ROSE COMB BROWN LEGHORN COCKERELS, large, healthy, from good laying strain, \$2.50. Harriett Tutt, Rouleau, Sask.

14 SELECTED YEARLING WHITE LEGHORN hens, single comb, in time for spring breeding, pen \$2.50, A. K. Stratton, Stonewall, Man.

PURE-BRED SINGLE COMB WHITE LEGHORN cockerels, \$3.00, two for \$5.00; good birds. pullets, \$2.00, laying. Mrs. W. J. Taylor, Reaburn, Man.

ROSE COMB WHITE LEGHORN COCKERELS, \$2.00; three, \$5.00. Jas. Currie, Viking, Alta.

SELLING—PURE-BRED BLACK LEGHORN cockerels, \$2.50. Mr. Karl Hult, Wasco, Sask.

SELLING—WHITE LEGHORN COCKERELS, single comb, \$2.50. J. McIver, Limerick, Sask.

BARRON W. LEGHORN COCKERELS, \$2.00 to \$3.00. Mrs. T. McNulty, Strathclair Man.

Minorcas

ROSE COMB BLACK MINORCA COCKERELS, \$2.50 each. Eggs, \$2.50 per setting. Wilfrid Osborne, Birnie, Man.

BLACK MINORCA COCKERELS, ROSE AND single combs, \$2.50 each. Theo Bergren, Viscount, Sask.

PURE-BRED BLACK MINORCA COCKERELS, single comb, \$3.00. L. D. Blair, Springfield, Man.

FOR SALE—SINGLE COMB BLACK MINOR- cas, \$2.50. A. Pow, Emerson, Man.

PURE-BRED BLACK MINORCA COCKERELS, \$3.00. G. Matteon, Davidson, Sask.

Anconas

PURE-BRED ANCONA COCKERELS, BOTH combs, \$3.00 each; two, \$5.00. Milo Yearous, Cadogan, Alta.

R. C. ANCONA COCKERELS, \$3.00 AND \$5.00. Ralph Kramer, Midale, Sask.

The Grain Growers' Guide

Paying the Store Bill

During the past year thousands of farmers have realized how important it is to have a flock of poultry. And the better bred they are the better quality of eggs and dressed poultry they get for market. Pure-bred poultry is finding a ready market through Guide classified ads.—here is the proof:

"A short time ago I placed an ad. in your paper for selling Pure-bred White Wyandotte Cockerels. I only ordered it to run for three issues, and am glad to say that by the time the second issue was out I had sold all my birds, and, of course, was very well pleased with such quick results."—Mrs. Fred Grunerud, Broderick, Sask.

"I had an ad. in The Farmers' Market Place some time ago and sold 22 Pure-bred White Pekin Drakes at \$2.50 each."—Mrs. Roycroft, Simpson, Sask.

Why Guide Ads. Bring Results Quickly

The Guide has the most readers—therefore

FARM MACHINERY

Quarter Section, 50 Acres Broken

NINE miles east of Saskatoon; will take steam threshing outfit as part payment. One Chevrolet 1½-ton Truck, excellent shape; will take steam engine as part payment. One Minneapolis 36-56 Separator, run 40 days; fitted with Garden City Feeder, 14-ft. carrier; as good as new. A bargain. One 25-75 Case Steam Engine, 36-inch Waterloo Separator, all attachments. A bargain. We buy, sell and exchange Threshing Outfits. If you have not now what you want, write us. We are distributors for the Minneapolis Threshing Machine Co., The Garden City Feeder Co. Ltd.

THE GARDINER MACHINE AND MOTOR CO.
SASKATOON, SASK.



Price reduced to 90 cents on all sizes up to four inches.

SELLING — 10-20 TITAN TRACTOR, 1919 model, mud lugs and steering device; Massey-Harris engine gang, three bottoms, stubble and breaker; 600-pound three-furrow plow; Hauser improved brush cutter, seven feet wide. All in good condition. \$1,500. Albert Reid, Arthland, Sask.

FOR SALE OR TRADE — 65 H.P. CASE steamer; 50 H.P. Case steamer; 36-56 Red River Special separator; 28-50 Case separator; eight-bottom automatic plow; eight-bottom John Deere plow; two 24-inch scrub breakers; Case power baller. 14-22 G. H. Curtis, Strome, Alta. 10-2

WANTED — 15-27 J. I. CASE TRACTOR OR Rumely 15-30, or Hart-Parr 15-30, or Stinson 18-36; not used over one year. Will give one quarter of unbroken land, two miles from Red Jacket, title to it free. Chas. Peterson, Wadena, Sask.

SELLING — THRESHING OUTFIT. CASE steam engine, 23-35, and Reeves separator, 36-60; worked five seasons; good repair. \$1,000 cash, balance on terms. Any reasonable offer accepted. J. Julian Cameron, Box 485, Raymore, Sask. 11-2

SELLING — GOOLD, SHAPLEY & MUIR 22 H.P. double opposed stationary engine, throttle, governor, friction clutch, pulley; used about 60 days for threshing. Will sell at bargain. Lew L. Reitan, Ardill, Sask.

SELLING — TWIN CITY WILD OAT CLEANER, six rolls with bagged attachment, only used a few days. Price \$50. W. R. Brockinton, Elva, Man. 11-2

SELLING — HART-PARR TRACTOR AND JOHN Deere three-furrow plow, both bottoms, all first-class condition, used only three months. \$1,475. Box 21, Rockyford, Alta.

FOR SALE — OLIVER ENGINE GANG PLOW, four-furrow, both bottoms, convertible into three-bottom, \$150; good as new. F. L. Nicol, Sidewood, Sask. 11-5

FOR SALE — 30-60 HART-PARR ENGINE, ALSO Adams 12-ft. grader; all first-class condition. Secretary, R. M. of Moosomin, No. 121, Moosomin, Sask.

SIX-SECTION HARROWS, ROLLER HITCH, new harrow, cart, wagon, gears, hay rack, Stewart horse clipper. First offer takes them. 1482 McDermot, Winnipeg.

FOR SALE OR TRADE FOR SMALLER OUT-fit — 25-45 Titan, six-bottom Deere plow, all in good condition. 12-25 or 15-27 preferred. C. Meyer, Gilbert Plains, Man. 10-2

FOR SALE — 12-25 WATERLOO BOY ENGINE, 1921 model, John Deere plow, \$1,200, or exchange for registered Percheron mares. Arthur Falloon, Foxwarren, Man. 7-5

EIGHT-FURROW COCKSHUTT GANG, \$200. Breakin standards, both bottoms, levers, beams, casting large wheels for ten gang. Hinkley, Wilkie, Sask. 7-6

FOR SALE, CHEAP, OR WILL TRADE FOR 30-60 OH Pull in good condition — 25-45 OH Pull, 34-56 Rumely separator. Tiffany Bros. Meeting Creek, Alta. 9-4

SELLING — BRAND NEW THREE-FURROW P. & O. tractor plow and 8-16 Mogul tractor, in perfect running order, for \$350. Fred Hillman, Portage la Prairie, Man. 11-3

FOR SALE — CASE 15-27 TRACTOR, 1920 model, first-class condition; 300-gallon oil tank; John Deere plows. What offers? Box 212, Canora, Sask.

BARGAINS — THREE-BOTTOM DEERE TRACTOR plow, perfect condition; extra shares; 48-inch extension rims; set angle lugs; tractor radiator, with fan. Ernest Symons, Wapella, Sask. 11-5

CASE 15-27 TRACTOR, BELL SEPARATOR, four-bottom plows; like new; used two seasons. \$2,800. Bargain. E. Chevrier, 452 Main, Winnipeg. 11-4

SELLING — CULTIPACKER, FOUR FEET, \$45; pulverizer, two-furrow, \$25; Titan steering device, \$25. E. Kaeding, Churchillbridge, Sask. 11-5

FOR SALE OR TRADE FOR STOCK — 12-20 E. B. tractor, in good running order. G. H. Wilson, Wiseton, Sask. 11-6

SELLING — 22-HORSE SAWYER-MASSEY steamer, good condition, \$800; terms. Box 430, Minnedosa, Man. 11-2

SELLING — 14-28 AVERY TRACTOR, NEW. Take horses and cash. Box 121, Milestone, Sask. 11-4

FOR SALE — ONE 32 CASE ENGINE AND 40-66 White separator. Price \$3,000. C. G. Eas, Waldheim, Sask.

FOR SALE — WELL-DRILL AND 100 FEET OF Casing, in good condition. Price \$300. Jas. Robinson, Two Creeks, Man. 11-3

FOR SALE — 10-20 MOGUL PLOWING AND threshing outfit, complete. Easy terms. Chas. Davenport, Rockhaven, Sask. 11-2

SELLING — RUMELY ENGINE BREAKER, four bottoms, individual, \$90 cash. W. Logan, Beadle, Sask.

SELLING — 25-45 MINNEAPOLIS ENGINE, SIX-stubbi bottom plow. Will exchange for smaller engine. A. Mildenburger, Sedley, Sask. 10-2

SELLING — 16-30 OIL PULL AND COCKSHUTT power-lift, four-bottom plow. Box 65, Tugaske, Sask. 7-6

FOR SALE — 10-20 TITAN ENGINE P. & O. plows, first-class condition, \$700. D. F. McCuaig, Francis, Sask. 9-3

SELLING — 12-20 HEIDER ENGINE AND three-bottom Rock Island plow, good condition. Box 21, Pinkham, Sask. 10-3

9-18 CASE TWO-FURROW PLOW, BOTH bottoms good condition, \$700. Will exchange for feeder cattle. Elton, Cowley, Alta. 10-3

WANTED — GRINDER, 12-INCH OR LARGER, extension for Hart-Parr 30-60. Walter Simpson, Brownlee, Sask. 10-3

WANTED — TWO EXTENSION RIMS, 64-INCH diameter. G. H. Curtis, Strome, Alta. 10-2

BIG FOUR TRACTOR GUIDE, \$40. JOE Stanek, Milden, Sask. 10-3

WANTED — 15-30 GAS TRACTOR. H. PRESCOTT, Nalcam, Sask. 8-4

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Farm Supplies at Wholesale
SUGAR today, \$7.80 per 100. Salt, per bbl., \$4.60. Salt blocks, 80c. Prunes, 13c and upwards. Evaporated Apples, 19c. Peaches, 19c. Formaldehyde, from 35c up, according to quantity. Paris Green, 53c. Total minimum of orders, 400 pounds or more. Write for prices on Syrups, Soaps and other goods. All standard quality. McCOLLOM LUMBER AND SUPPLY CO. Union Trust Bldg., Winnipeg

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Ladies' and Gents' Garments
WORK RETURNED PROMPTLY
SEND FOR PRICE LIST
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BRANDON, MAN.

SELLING — POTATOES: WILLOW POSTS; seed and feed oats; cordwood; upland, timothy hay. Prices on application. Secretary, Leduc U.F.A. Co-operative Assn. Ltd., Leduc, Alta. 11-6

SELL, DISCOUNT — LLANO CO-OPERATIVE colony stock, Louisiana. A. W. Goodwin, Battleford, Sask. 9-5

OVERLAND, GOOD ORDER, SALE OR TRADE. Highest cash offer, if over \$200, takes. Frederickson, Broderick, Sask.

FOR SALE OR TRADE — McLAUGHLIN TOURING car, in good condition, for registered Shorthorns. M. Jenkins, Pigeon Bluff, Man. 10-2

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SELLING MONEY AT HOME — WE WILL PAY \$15 to \$50 weekly for your spare time writing show cards; no canvassing; we instruct you and supply you with work. Write, Brennan Show Card System Limited, 50 Currie Bldg., 269 College St., Toronto. 10-4

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WANTED — TO RENT OR MANAGE FULLY equipped half-section, at least 200 acres broken good district. Box 69, Grain Growers' Guide, Winnipeg. 10-3

WANTED — POSITION AS FARM MANAGER, agricultural college graduate, 12 years' experience, available May 1. Box 67, Grain Growers' Guide, Winnipeg. 9-3

BY EXPERIENCED TRACTOR AND STOCK man, season's work. Wife to cook. L. Manning, Dapp, Alta. 10-2

GAS ENGINEER WANTS POSITION ON FARM. Maxwell King, Fork River, Man. 10-2

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Campbell's Tested Vegetable and Flower Seeds Produce Results

BUY Seeds that Germinate. Don't risk your 1922 crop, but send today for our Seed Annual. Give us a trial order — that is all we ask. Our seeds have proven best for the West.

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EVERGREENS AND BUSHES — ONE OF THE hardest trees for the prairie. The experimental farms and nurseries all recommend evergreens. We have a plan that schools may obtain trees free. Make your homes beautiful at reasonable prices. Write for prices. Fred Wimer, Box 199, Canora, Sask.

FOR SALE — EVERBERRING STRAWBERRY plants, dozen, 75 cents; 100, \$5.00. Improved Dunlop strawberries, dozen, 60 cents. Raspberries, dozen, 70 cents. German Iris, 15 cents; dozen, \$1.00. All postpaid. Nelson Clark, Treesbank, Man. 11-5

GOOD THINGS FOR PRAIRIE PLANTINGS — Northernmost varieties fruits, flowers, ornamentals. Catalog. W. J. Boughey, Morden, Man., formerly Valley River 5ft

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\$80 CASH AND \$80 A YEAR

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ALBERTA WHEAT LAND SNAP — FULTON Brothers, Langdon, Alberta, are subdividing their 5,500-acre wheat ranch at Indus, 17 miles east of Calgary, main line Canadian Pacific, and selling on crop payment. You may buy cheap farm lands and go broke, but if you buy part of Fulton ranch you are buying the best, as proven by ten years' successful wheat growing without fail or crop failure. 50 to 60 dollars per acre. Address above.

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FOR SALE — QUARTER-SECTION, ALL fenced, 40 acres under cultivation. For particulars, write owner, Mrs. L. Sandercock, Vegreville, Alta. 10-5

IDEAL STOCK RANCH, EQUIPPED, SMALL stock, adjoining Cypress Hill government forest reserve. Particulars, write E. Bartlett, Medicine Hat, Alta.

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FARM WANTED — SEND DESCRIPTION AND price. John J. Black, Chippewa Falls, Wis. 10-3

FOR SALE — SMALL RANCH WHERE CROPS don't fail. M. B. Bottsford, Bagby Creek, Man. 10-3

WANTED — TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wisconsin 10-3

SELLING — 320 ACRES ON CROP PAYMENT. L. S. Nielsen, Leipzig, Sask. 10-3

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REGISTERED SEED WHEAT, SECOND generation, prize-winning strains, splendid foundation stock, guaranteed 100% pure. Samples free. Marquis, \$2.25; Ruby, \$1.00. Sacked and sealed. Satisfaction or money back. Henry Young, Millet, Alta. 7-5

REGISTERED MARQUIS WHEAT, SECOND generation, \$1.75 bushel. Victory oats, second generation, 75 cents; sacks extra. Special price car-load lots in bulk. F. O. B. our station. Kjellander Seed Farms, Wil

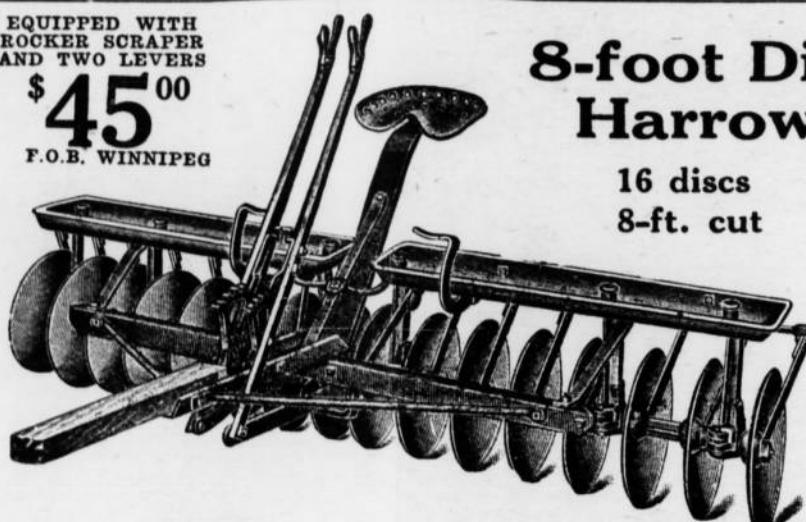
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ROCKER SCRAPER
AND TWO LEVERS

\$45.00

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8-foot Disc Harrow

16 discs
8-ft. cut

F.O.B. Regina or Calgary or
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X43—12 discs, 16-inch diameter, cut 6 ft.; 3-horse evener.	\$38.50	\$41.00	\$42.50
Wt. 490 lbs.			
X44—14 discs, 16-inch diameter, cut 7 ft.; 4-horse evener.	41.00	43.50	45.00
Wt. 522 lbs.			
X45—16 discs, 16-inch diameter, cut 8 ft.; 4-horse evener.	45.00	46.00	48.00
Wt. 574 lbs.			
X48—Forecarriage for any of the above Disc Harrows, wt. 61 lbs.	8.25	8.50	8.75

\$16.50 LEVER HARROWS \$16.50

Any Branch
Above price for two-section lever harrow, complete with evener. Each section has five bars of channel steel with 30 teeth to the section. Three-section lever harrow for \$25.25, and four-section lever harrow for \$33.75. Single sections, weighing 91 lbs., for \$7.50.

\$28.50 WILL BUY A \$31.50

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Five-Section Boss Harrow

COMPLETE WITH EVENER

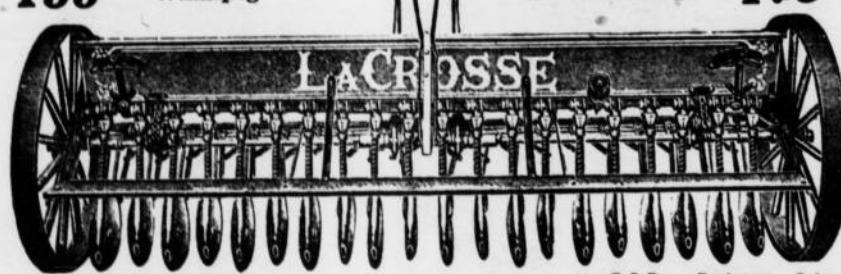
Tooth bars selected white oak—teeth mortised in. Get full price list.

Lacrosse Power-Lift Seed Drill

\$155.00 F.O.B.
Winnipeg

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\$173.65



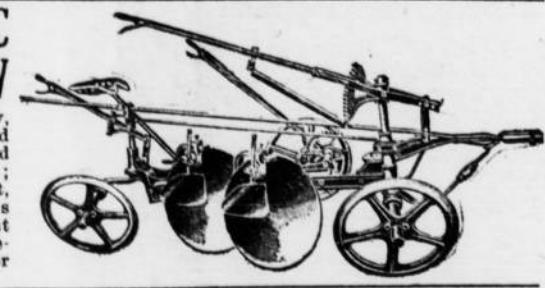
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X77—20-run Shoe Drill, weight 1,358 lbs.	\$145.00	\$155.40	\$161.65
X81—20-run Single Disc Drill, wt. 1,518 lbs.	155.00	166.45	173.65
X85—20-run Double Disc Drill, wt. 1,521 lbs.	185.00	197.25	204.85

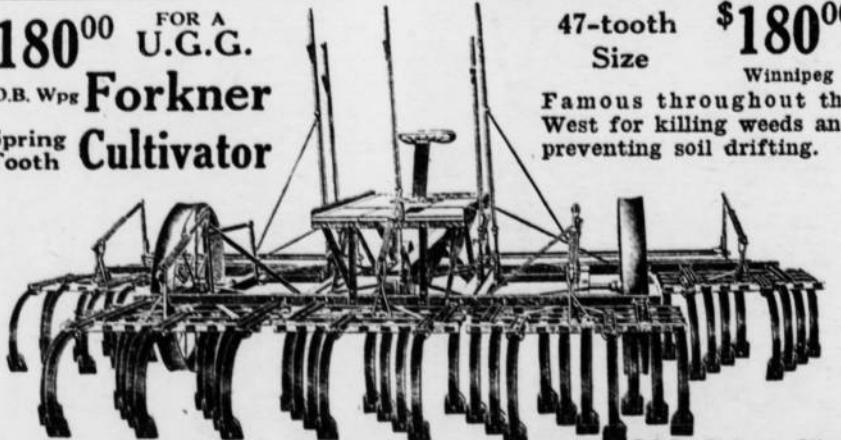
18 and 22-run sizes correspondingly low. Press Wheel Attachments for all sizes; also Hopper Extensions and Grass Seed Attachments.

\$45.00 TWO-DISC For This PLOW

Winnipeg
A properly proportioned plow, adapted for use in loose soil and second plowing where moldboard plows will not scour. Axle, 1 1/2 inch; discs, 24 ins. diameter. Weight, 981 lbs. Order No. X33. Get prices on heavy, two-disc plows (weight 1,285 lbs.), also on one and three-bottom disc plows and on Tractor Disc Plows.



\$180.00 FOR A F.O.B. Wpg Forkner Spring Tooth Cultivator



47-tooth \$180.00
Size

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Famous throughout the
West for killing weeds and
preventing soil drifting.

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X108a—No. 20 Forkner Cultivator, with 20 steels; wt. 700 lbs...	\$90.00	\$94.00	\$96.50
X105—No. 34 Forkner Cultivator, with 34 steels; wt. 1250 lbs...	140.00	145.40	148.75
X107—No. 47 Forkner Cultivator, with 47 steels; wt. 1500 lbs...	180.00	186.50	190.50

\$45.00

FOR 60-GAL.
SIZE



U.G.G. SANITARY KING Cream Separator

Will help make dairying pay by extracting every available ounce of butter-fat. Close skimming, durable, easy to operate and easy to keep clean.

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X125—14-gal. capacity Separator, no stand; for herds of from 1 to 3 cows; wt. 90 lbs...	\$25.00	\$25.90	\$26.25
X127—25-gal. capacity Separator with stand; for herds of from 1 to 6 cows; wt. 197 lbs...	35.00	36.20	36.90
X128—38-gal. capacity Separator with stand; for herds of from 6 to 12 cows; wt. 200 lbs...	40.00	41.25	42.00
X129—60-gal. capacity Separator with stand; for herds of from 20 cows up; wt. 270 lbs...	45.00	46.50	47.50
X130—80-gal. capacity Separator with stand; for herds of from 20 cows up; wt. 270 lbs...	50.00	51.50	52.50

"Meadows" Power Washing Machine



\$50.00

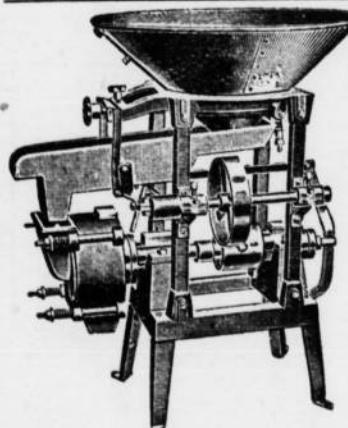
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With swinging safety wringer. Order No. X31. This double-tub washer with platform as shown. Weight 330 lbs.

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This is a good time to buy a Stock Tank. Prices on heavy galvanized tanks, reinforced with angle iron, 25 per cent. less than recently quoted



U.G.G. M-Re Grinders

Grind with Emery Plates. An extremely high-class machine at a very low price.

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X25—8 in., wt. 360 lbs...	\$35.00	\$37.00	\$39.00
X26—10 in., wt. 492 lbs...	60.00	63.00	65.00
X27—12 in., wt. 638 lbs...	120.00	125.00	130.00

A WONDERFUL GRINDING OUT-FIT FOR THE BIG FARM

A 10-inch M-Re Grinder, complete with Bagger and a 12-h.p. Engine, for \$382.00. Engine is a high-grade Hercules with Webster magneto, and was used for a short time in elevator service, for which it was unsuited. Has been rebuilt and is now guaranteed as good as new.

\$8.00 BUYS THIS

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Best selected imported oak barrels—tight and loose pulley.

X50—Power Churn, tight and loose pulley, 20-gal. capacity; wt. 90 lbs...

X51—Power Churn, 26-gal. capacity; wt. 100 lbs...

\$8.00 \$8.50 \$9.00

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10.00 10.50 11.00

Sanitary Milk Cans

Sanitary, seamless Cream Cans, made of 18-gauge iron, very heavily tinned. Body and bottom seamless. Tubular steel handles.

5-gallon Can

\$5.00 \$5.10 \$5.25

8-gallon Can

6.00 6.20 6.40



Roller Grain Crusher

LARGE HOPPER HOLDS SACK OF GRAIN
Large capacity. Large, long, babbited bearings.

F.O.B. All Branches

X1—12-inch, 2-roll Grain Crusher, wt. 435 lbs., capacity 30 bushels	\$35.00
X3—14-inch, 2-roll Grain Crusher, wt. 460 lbs., capacity 40 bushels	40.00
X2—12-inch 3-roll Grain Crusher, wt. 600 lbs., capacity 35 bushels	55.00
X4—14-inch, 3-roll Grain Crusher, wt. 670 lbs.	65.00
X5—Screen Attachments, all sizes	12.00

Write for Special Prices on Elevators with Bagger Attachments.

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If you need Harness, write for illustrated price list giving new low prices on U.G.G. Farm Harness.

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